

## eCommerce Registration

# Single Sign On

**The main focus is on the customer**

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**Version:** 1.0, 2002-02-19

**Abstract:**

The sentence “The main focus is on the customer” is part of the marketing policy of nearly all large and medium enterprises of the service sector.

A customer who is registered at his bank for different services (e.g. online banking, phone banking, online brokerage), often gets different access codes (PIN = Personal Identification Number) for each of the systems. In extreme cases he even gets different TAN blocks (TAN = TransAction Number). Thus not the customer itself is identified during login but a combination of account and application data.

This document points out, how one single sophisticated customer identification for all applications can both save expenses and increase the convenience for the customer.

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## Basics

Initially most companies considered the internet as medium for information and marketing only. Today the main focus is on applications and services. Therefore not only layout and content of the web pages are important but the workflow design within the provided applications as well.

Applications are normally offered only to a restricted customer group. To achieve this, mechanisms for registration and identification are necessary. If the customer's explicit approval is needed to conduct a transaction, a mechanism for transaction release is required as well:

**Registration** – non-recurring process of collecting customer data and providing customer with access data.

**Identification** – process where the customer is identified by the system according to the access data provided during registration.

**Transaction release** – process to explicitly confirm a transaction (e.g. by entering a TAN<sup>1</sup>, digital signature, etc.)

The workflows for registration, identification and transaction release are almost independent from the application. Thus in principle two realization approaches for these processes are possible: as part of each application (Multiple Sign On) or as central component with interfaces to the separate applications (Single Sign On). In the following the advantages and disadvantages of these two approaches will be discussed in detail.

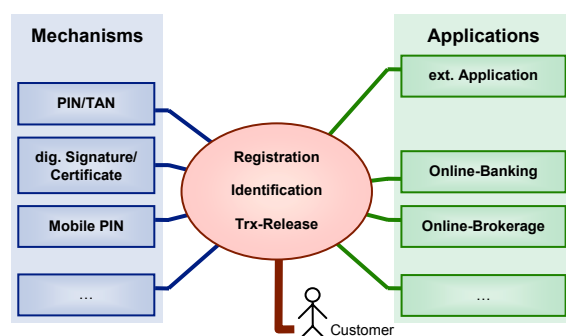
## Multiple Sign On

Multiple Sign On is the situation which currently applies to most companies: within the company several systems exist of which each one has its own registration, identification and transaction release mechanism. One advantage of this approach is that a new ap-

plication can be developed absolutely independent from already existing applications. This reduces the coordination effort. In extreme cases, however, this leads e.g. to the fact that a bank customer receives a TAN block for online banking and another for online brokerage, although the same transaction release mechanism is used. In case other applications will be added it's not reasonable that the customer will get a third or fourth TAN block. To establish new mechanisms for several applications an enormous effort is necessary to adjust each of these applications.

## Single Sign On

An important step towards Single Sign On consists in the accurate separation of the application from the mechanisms for registration, identification and transaction release. The customer is registered once. As a result he gets a unique identity for all applications connected to the system. Using the centrally available mechanisms each of the applications can determine the customer's identity. In principle every mechanism is available for every application. Which of them will be finally used is determined by the business policy. The following figure illustrates this raw concept:



On the one hand, the realization of this concept requires a high coordination effort, but on the other hand there are enormous advan-

<sup>1</sup> TransAction Number

tages for both the company and its customers:

- Central administration of individual customer access rights to applications is possible.
- The central administration allows fast and cost effective provision of new mechanisms for several applications.
- Consolidation of the components for identification and transaction release reduces the effort for administration and therefore the running expenses in mid-term.
- With the new infrastructure it is possible to offer registration, identification and transaction release as services for third parties.
- A customer is only registered once (centrally).
- Access to additional applications can be granted to the customer without the need to register him again.

## Conclusion

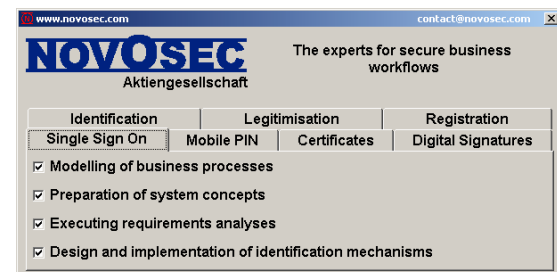
Establishing a Single Sign On solution will pay off for companies who, in mid term, plan to provide a couple of internet applications or to consolidate already existing applications. For the company which is using an established Single Sign On solution instead of a Multiple Sign On solution the substantial cost reduction effects mainly result from the reduced administration effort. The invention of new mechanisms as well as their integration can be done with drastically reduced effort since they have to be installed centrally only once and may be used for all applications. Up to now new mechanisms had to be integrated into every single application. Another positive side effect is the consolidation of customer's data: a customer is only registered once and therefore redundancies and inconsistencies (e.g. in address data) are prevented.

The advantage of an identification independent from the various applications is obvious. No matter over which channel and for which

application the customer connects to his bank, he can prove his identity with the same identification medium (e.g. password or customer card). If the customer is authorized to conduct transactions on another account (for example the account of the wife resp. husband) there is no need to leave the internet banking (and therefore the bank!) and to login later again, instead he can directly submit transactions for that account as well. In addition to this the opportunity to extend the new infrastructure to third party services provides new sources of income. Third party providers may use the identification platform to avoid the high cost of an own customer registration. They pay a relatively low price to identify their customers and to perform transaction releases.

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