



PVS performs a high level of quality control by checking every single element.

## PVS (Personalization Validation System)

PVS carries out the quality control process prior to real card production.

### Integrated Testing Solutions

The PVS (Personalization Validation System) checks EMV data according to standard EMV rules and issuer-specific rules at various points of the card personalization system and informs the predefined users by client screens, mail, and etc.

Nowadays, banks are facing more and more unexpected and unbudgeted extra costs associated with card issuing due to erroneous card production and customer dissatisfaction thereafter.

The fact that EMV standards are extended regularly and that the new rules are continuously introduced, this increases the importance of quality control during the card issuing process. Before the real smart card production starts, finding all errors and mistakes in the highest future-proof way as possible, will help the issuing organization conduct a smooth and secure card production process.

The main advantage of the PVS, in comparison to other systems, is that it carries out the quality control process BEFORE real card production. Quality control systems, that only check cards after the real production, will test a limited number of randomly selected cards; therefore, not all cards sent to the market have been subjected to a quality check.

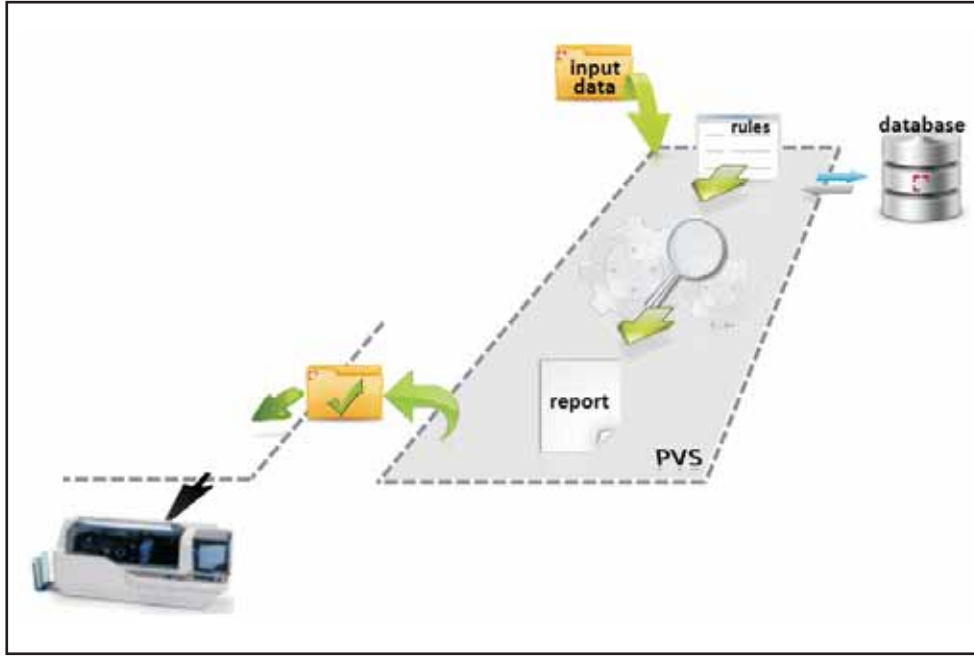
Furthermore the errors cannot be detected before card printing. Banks issuing cards without using the PVS may face serious financial costs.

Existing quality control techniques are quite limited in the sense that they check only a limited number of randomly selected sample cards. Not all of the cards can be checked and not all of the profiles can be controlled in detail with these limited tests. SmartSoft PVS, which imposes the quality control check before the card production by checking all of the card data in detail, prevents probable errors in advance. The system tests the data being personalized in depth and exhaustively and the test results are reported immediately to the relevant persons.

#### Rule Based Functioning

It is essential to have an EMV quality control system that is "rule based" since the rules of EMV change constantly. Also, an issuer can define new rules to avoid risks caused by specific conditions.

With its flexible structure allowing the definition of various rules, the PVS permits the defining of every kind of EMV, VISA, and MasterCard compatible rules within



the system. In case of error detection during quality control tests, which show inconsistency with the pre-defined rules in the system, the PVS sends a warning to the relevant personnel via client screens, e-mail or SMS.

## Automated Mode and Warning Mechanism

The PVS can work in an automated mode and in the case of error detection, it can send out warnings to a list of pre-listed personnel via client screens, e-mail or SMS.

## System Infrastructure

The PVS performs a high level of quality control by checking every single EMV element in the file coming from the "data preparation system" and sent to the "Card personalization system". Quality control is based on the general rules defined by the EMV and specific ones defined by the issuer. Faulty and correct records are listed separately at the end of the process. Correct records are sent to the personalization process whereas faulty

records are sent back to the data preparation system to be reconstructed.

## Application Infrastructure

- Multi server support
- Swift and smooth Integration

## General Features

- Compatible with EMV rules
- Based on the specific rules defined by the Issuer
- Advanced level "rule definition" interface
- User Friendly graphical interface
- Capability to define rules on the internal element of a smart card
- Detailed information about EMV data elements
- Parametric functioning: Stopping the card production process when a certain threshold error level is achieved
- Separation of faulty and correct records
- Sending out information with regards to encountered errors.