

GENERAL NOTES
ON
Rules & Regulations

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1 Introduction

This document gives general notes on the Chipknip Rules & Regulations, which contain the various legal, organisational, financial and technical arrangements regarding all critical activities relating to the Chipknip brand and product.

These notes cover:

- the reasons for developing the Chipknip Rules & Regulations;
- a description of the Chipknip payment product;
- the Licence and Certificate structure;
- the content and structure of the document entitled '*Chipknip Acceptance Regulations*';
- the content and structure of the document entitled '*Chipknip Rules & Regulations*';
- the content and structure of the document entitled '*General Rules & Regulations – Part II Concepts and Definitions*';
- a brief description of the processes related to the Chipknip product.

No rights may be derived from these general notes nor do they form part of the Chipknip Rules & Regulations.

2 Reasons for the Chipknip Rules & Regulations

Chipknip B.V. is the owner of the Chipknip brand and payment product. The company has the task of defining and managing standards applicable to the various roles identified as part of the payment transaction system of the Netherlands relating to the Chipknip payment product. Chipknip Rules & Regulations (Chipknip R&R) have accordingly been drafted for the purpose of regulating and controlling the Chipknip payment product. The Chipknip R&R contain descriptions of the various roles and activities which players admitted to the Chipknip payment transaction market are able to perform and are permitted to perform. These roles and activities are governed by Licences and Certificates issued by Chipknip B.V.

As owner and operator of the Chipknip payment product, Chipknip B.V. guarantees among other things the efficiency, quality (including reliability and image) and integrity of Chipknip payment transactions. The principal tasks of Chipknip B.V. are as:

- owner, manager and operator of the Chipknip payment product;
- regulator, responsible for the drafting, adoption and management of Chipknip Rules & Regulations;
- issuer of Licences and Certificates;
- overseer of Licensees and Certificate Holders (with the power to impose sanctions);
- coordinator of anti-fraud measures;
- facilitator of consultation structures for Chipknip users;
- developer of the Chipknip payment product, including innovations;
- manager of public relations, public affairs, media contacts and brand promotion.

3 Chipknip

3.1 The Chipknip payment product

The Chipknip payment product covers all the roles and activities licensed and certified by Chipknip B.V. in the application chain that enables a Cardholder using a plastic card incorporating a computer chip containing the Chipknip electronic purse (e-purse) application to perform financial transactions (loading the card with value and making payments). Cardholder authentication takes place only when the Chipknip e-purse is loaded, and depends on offline validation of the appropriate personal identification number (PIN). The PIN is a four-digit numeric code known only to the Cardholder. A loading transaction using an Unattended Loading Device (ULD) Terminal loads the Chipknip card with the required value. A payment transaction using a Point-Of-Sale (POS) Terminal does not involve entering the PIN. The Cardholder is merely required to verify the amount of the transaction and the payment will then be deducted from the value stored on the Chipknip card.

Both Chipknip cards and either fixed or mobile locations of POS Terminals and ULD Terminals are identified by means of the Chipknip logo, which is a registered trademark.



In addition to Chipknip cards that are linked to a current account held by the Cardholder, the Chipknip product can also be used for prepaid or non-account-linked cards. Cards of this type can only be used to make payments and cannot be topped up when all the stored value in the e-purse has been used.

Provided a card bears the Chipknip logo, it can be used in any POS Terminal or ULD Terminal in the Netherlands where the Chipknip logo is displayed, as well as in mobile POS Terminals and ULD Terminals, regardless of the institution issuing the Cardholder's Chipknip card and the institution or institutions processing transactions on behalf of the Merchant.

Issuing institutions are also at liberty to use the same card for other applications and other brands, provided it has been shown that such applications cannot affect the integrity of the Chipknip payment product.

3.2 The Chipknip brand

Chipknip is a registered trademark of Chipknip B.V. The Chipknip brand is used, among other things, to identify the electronic payment medium going by that name both for marketing purposes and in use. The Chipknip brand may only be used in connection with the related activities and strictly according to the terms of a Licence Agreement entered into with Chipknip B.V. for that purpose.

3.3 Purpose of the Chipknip product

Holders of a Chipknip card are able to spend all or part of the balance on the current account linked to the card by loading the Chipknip card to transfer the required value into their electronic purse. The Chipknip product provides holders of a Chipknip card with a simple, inexpensive means of making electronic payments to Merchants as well as an instrument for use in automated payment equipment such as car park machines and vending machines.

For issuing banks, the Chipknip product means that they can also offer their customers an alternative to cash for any over-the-counter payments, thus avoiding the risks associated with carrying cash.

For acquiring banks, the Chipknip product means that they can provide Merchants with a fast and straightforward system for accepting electronic payments from their customers without the need to be online and without requiring a PIN to be entered to authorise the payment.¹ The Chipknip product therefore also offers Merchants a way of reducing the risks associated with cash.

Licensees enter into contracts with Merchants and Cardholders for use of the Chipknip product on their own terms and conditions. In signing such contracts, however, Merchants and Cardholders also undertake to comply with the agreed conditions for the Chipknip product.

¹ Individual card loading transactions are cleared by or on behalf of the issuing bank, which therefore guarantees the transaction.

4 Licence and Certificate structure

Institutions wishing to enter the Chipknip payment market must obtain a Licence or a Certificate from Chipknip B.V. Institutions wishing to perform the role of Issuing Bank and/or Acquiring Bank require a Licence. Institutions wishing to provide support services in upstream markets on behalf of a Licensee in relation to Chipknip payment transactions may obtain a Certificate, provided they comply with the rules for the activities concerned (see Section 5.4 for a description of the roles). The following section of these general notes (Section 5) explains how to obtain a Licence or Certificate.

Chipknip B.V. has adopted a uniform set of rules, the Chipknip Rules & Regulations, which are to be adhered to by every Licensee and Certificate Holder. The Chipknip R&R contain among other things rules covering all critical activities relating to the Chipknip payment product. The rules relating to the use of the Chipknip product are laid down in the Branding Manual. As regards the activities covered by the Chipknip R&R rules, a distinction is made between the issuing domain and the acquiring domain. The issuing domain briefly comprises all activities relating to the issue of Chipknip cards by an Issuing Bank in order to enable a Cardholder to make Chipknip payments. The acquiring domain comprises all activities relating to the processing of Chipknip payments by an Acquiring Bank on behalf of a Merchant.

Within each domain, the above critical activities are grouped into separate roles. The Chipknip R&R itemise the individual roles in each domain and the activities involved in performing those roles.

Licensees are under obligation to conform to all the standards applicable to the acquiring or issuing domain. As already mentioned, there are a number of roles in each domain (as defined in the Chipknip Rules & Regulations section) and a number of activities are linked to each role. Unless they are directly linked to a Licence, it is necessary to obtain a Certificate in order to perform the various activities (linked to a specific role). If a Licensee performs such activities itself, it is the Licensee's responsibility to obtain a Certificate for those activities. If a Licensee subcontracts those activities, the contracting institution will require a Certificate from Chipknip B.V. for the role concerned plus the associated activity or activities. Licensees may only subcontract activities to certified institutions. Certificate Holders can be certified to perform one or more (or all) of the activities associated with a specific role. It is the Licensee's responsibility to ensure that all the activities in a particular domain are covered.

4.1 Acceptance and Acceptance Regulations

A Licence is obtained by entering into a Licence Agreement with Chipknip B.V. A Certificate is obtained by entering into a Certificate Agreement with Chipknip B.V.

To qualify for a Licence Agreement or a Certificate Agreement, an institution must demonstrate that it satisfies the acceptance standards for the role which it wishes to perform as part of the Chipknip payment product. This requires the institution to successfully complete the acceptance procedure in accordance with the Chipknip B.V. acceptance regulations. To begin the acceptance procedure, the institution must sign and return the acceptance regulations, other documents and the associated secrecy agreement to Chipknip B.V. to show its acceptance thereof. Chipknip B.V. will then send the institution a documentation set, including the Chipknip R&R.

5 Chipknip Rules & Regulations

5.1 General

The '*Chipknip Rules & Regulations*' lay down all the requirements to be satisfied by Licensees and Certificate Holders relating to the critical activities.

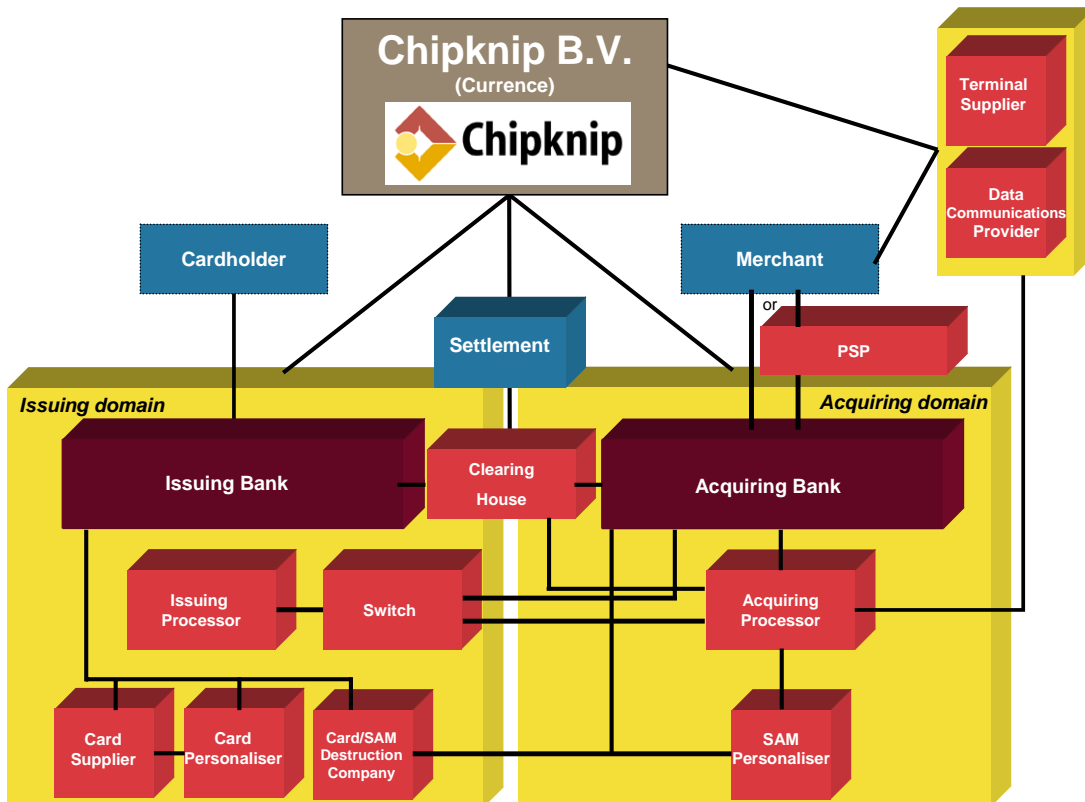
5.2 Starting points

The individual requirements laid down in the Chipknip R&R have the following starting points:

- rulings by the Nederlandsche Bank (DNB), in particular the 'controlled operations' requirement pursuant to the Financial Supervision Act (WFT), as contained in the Order-in-Council (AMvB) under Part 3 of the WFT entitled 'Decree on Prudential Rules for Financial Undertakings' (AMvB 5), Bulletin of Acts, Orders and Decrees 2006,519' and supervision standards;
- the Core Principles for Systemically Important Payment Systems (CPSS), containing standards drawn up by the G-10 countries and adopted by the European Central Bank in January 2001;
- independent and objective analysis of the Chipknip R&R, including market consultation, as part of the formal ratification of these R&R.

5.3 Roles

Underpinning the Chipknip R&R is the system of separate roles developed by Chipknip B.V. This is the system used in the Dutch market for over-the-counter payment transactions using Chipknip. The following diagram shows how the roles are organised.



The diagram shows the various roles involved in Chipknip payment transactions, for which these Chipknip R&R lay down specific requirements. The Chipknip R&R also contain a description of the individual roles and their interrelationships. The following section provides a brief description to explain the system. No rights may be derived from this brief description.

5.4 Role descriptions

Chipknip B.V.

Chipknip B.V. is owner of the Chipknip payment product and, in that capacity, lays down standards for the Chipknip product. Chipknip B.V.'s responsibilities have already been described in Section 2.

Issuing Bank

This is the role which an Institution whose business it is to acquire redeemable funds outside a restricted circle from other than professional market parties and to grant credit for its own account and which has obtained a licence in accordance with the statutory and other rules and regulations currently in force is able to perform (when duly licensed). The role involves responsibility for the entire issuing domain with regard to Chipknip payment transaction activities relating to cards issued by said bank. The Issuing Bank is responsible for the guaranteed transfer of funds to an Acquiring Bank in respect of payments made by a Cardholder (customer of the Issuing Bank) to a Merchant (customer of the Acquiring Bank concerned). The Issuing Bank enters into agreements with the Cardholder concerning Chipknip card issue, use and authorisation of card value loading transactions. As regards the processing of payments (clearing) between Issuing Bank and Acquiring Bank, it is up to the institutions concerned to arrive at mutual agreements. They may employ the services of a Clearing House for this purpose. Issuing Banks also enter into agreements with holders of ULD Terminals belonging to them concerning the use of such devices for Chipknip cards. For all other operating activities in the issuing domain not performed by Licensees themselves, Issuing Banks are required to enter into agreements with institutions performing the other issuing domain roles, as described below.

Issuing Processor

This is the role which an institution is able to perform that is responsible on behalf of a Licensee (Issuing Bank) for those issuing domain activities connected with operations that are not the specific responsibility of the Licensee itself and are not the responsibility of the Card Supplier, Card Personaliser or Card Destroyer (see below) (when in possession of the appropriate Certificate).

Switch

This is the role which an institution is able to perform that is responsible on behalf of a Licensee (Issuing Bank) for issuing domain switching operations (when in possession of the appropriate Certificate). Switching operations refers to the routing of card loading transaction details between Issuing Processors for transaction processing purposes. It is up to Issuing Banks to enter into the appropriate agreements with the Switch institution.

Card Supplier

This is the role which an institution is able to perform that is responsible on behalf of a Licensee (Issuing Bank) for producing cards to the Licensee's design (when in possession of the appropriate Certificate).

Card Personaliser

This is the role which an institution is able to perform that is responsible on behalf of a Licensee (Issuing Bank) for adding details supplied by an Issuing Processor to a Chipknip card (when in possession of the appropriate Certificate). The Card Personaliser is also responsible for adding visual personalisation details.

Card/SAM Destruction Company

This is the role which an institution is able to perform that is responsible on behalf of a Licensee for destroying cards (Issuing Bank) and SAMs (Acquiring Bank) (when in possession of the appropriate Certificate).

Cardholder

A Cardholder is a person to whom a card-issuing institution has issued a Chipknip card to use. Chipknip B.V. does not impose any requirements with respect to Cardholders.

Loading Device Holder

A Loading Device Holder is an organisation in possession of a Chipknip ULD Terminal enabling Cardholders to top up the value on their Chipknip cards. A Loading Device Holder can be an Institution or any organisation wishing to offer such a facility to staff, visitors or anyone else. Loading Device Holders that are not Chipknip Licensees are required to enter into an appropriate agreement with their bank. A Loading Device Holder's ULD Terminal, provided by a Terminal Supplier, is connected to an Issuing Processor via a data communication connection provided by a Data Communications Provider.

Acquiring Bank

This is the role which an Institution whose business it is to acquire redeemable funds outside a restricted circle from other than professional market parties and to grant credit for its own account and which has obtained a licence in accordance with the statutory and other rules and regulations currently in force is able to perform (when duly licensed). The role involves responsibility for the entire acquiring domain with regard to Chipknip payment transaction activities relating to Merchants served by said bank. The Acquiring Bank is responsible for the guaranteed transfer of funds to a Merchant in respect of payments made by a Cardholder to a Merchant (customer of the Acquiring Bank concerned). The Acquiring Bank enters into agreements with the Merchant concerning the processing of Chipknip payment transactions on the Merchant's behalf. As regards the processing of payments (clearing) between Acquiring Bank and Issuing Bank, it is up to the institutions concerned to arrive at mutual agreements. They may employ the services of a Clearing House for this purpose. For all other operating activities in the acquiring domain not performed by Licensees themselves, Acquiring Banks are required to enter into agreements with institutions performing the other acquiring domain roles, as described below.

Acquiring Processor

This is the role which an institution is able to perform that is responsible on behalf of a Licensee (Acquiring Bank) for those acquiring domain host activities connected with operations that are concerned with processing payment transactions (when in possession of the appropriate Certificate). 'Host activities' refers to transferring and processing transaction details between a terminal and the Acquiring Processor's host system and their onward transmission to the Issuing Bank and Acquiring Bank, or to a Clearing House.

Terminal Supplier

This is the role which an institution is able to perform that is responsible on behalf of a Merchant (in the case of POS Terminals) or on behalf of a Loading Device Holder (in the case of ULD Terminals) for producing certified terminals conforming to the specifications of an Acquiring Processor (in the case of POS Terminals) or of an Issuing Processor (in the case of ULD Terminals) satisfying Chipknip B.V.'s generic standards (when in possession of the appropriate Certificate).

Data Communications Provider

This is the role which an institution is able to perform that is responsible on behalf of a Merchant or a Loading Device Holder for providing facilities for data communication between the Merchant's POS Terminal and the Acquiring Processor or between the Loading Device Holder's ULD Terminal and the Issuing Processor (when in possession of the appropriate Certificate).

Merchant

A Merchant is an institution having a POS Terminal for accepting payments using a Cardholder's Chipknip card for products and/or services supplied by the Merchant. The Merchant's terminal, provided by a Terminal Supplier, is connected to the Acquiring Processor via a data communication connection provided by a Data Communications Provider. Chipknip B.V. does not impose any requirements with respect to Merchants, although the Acquiring Processor and Acquiring Bank are under obligation to ensure that Merchants affiliated to them operate with certified terminals and observe security standards with regard to the installation and user-friendly of said terminals, among other things. The Merchant is a customer of an Acquiring Bank and has an account with the Acquiring Bank or is a customer of a Payment Service Provider that looks after the processing of Chipknip payments on behalf of the Merchant.

Payment Service Provider

PSP is the role which an institution is able to perform whose business is the independent provision of professional services connected with the settlement of Chipknip payments made to a Merchant, thus performing the role of intermediary between Merchant and the Merchant's bank (when in possession of the appropriate Certificate). A PSP can also – acting as intermediary – provide other services (whether requiring a Certificate or otherwise) relating to Chipknip payments, such as providing POS Terminals and network services, payment administration services etc. Not included are institutions serving Merchants within their own group or a particular store format (they are treated as Merchants). PSPs should have a 'Processing Contract for Transfer and Processing of Data for PIN and/or Chipknip Transactions' with an Acquiring Bank licensed by Chipknip B.V.

Clearing House

This role can either be performed bilaterally between an Acquiring Bank and an Issuing Bank or entrusted to an institution looking after the clearing of transactions on behalf of various Acquiring Banks and Issuing Banks. The Clearing House role is defined as the role which an institution is able to perform that is responsible on behalf of Licensees (in both issuing and acquiring domains) for collecting and redistributing transaction details between Acquiring Bank and Issuing Bank, leading to the financial settlement of transactions (when in possession of the appropriate Certificate). Intragroup transactions do not involve clearing (and therefore do not use the Clearing House role) if Acquiring Bank and Issuing Bank are one and the same. The Clearing House is also responsible for the preparation and submission of transaction details for settlement via the DNB organisation.

SAM Personaliser

This is the role which an institution is able to perform that is responsible on behalf of a Terminal Supplier for adding details to a SAM chip (when in possession of the appropriate Certificate). This personalisation involves making the SAM identifiable and installing encryption keys.

5.5 Structure

The R&R follow the same structure as the system of roles, with a set of requirements defined for each separate role. These requirements are divided into requirements of a general organisational nature and requirements relating to the process involved in the specific role. This process comprises the various critical activities together making up the complete role. The process-related requirements are in turn divided into quality requirements and, where necessary, additional detail requirements of a more operational nature.

All the requirements are specifically identified in the documentation and explanatory notes are included where appropriate.

6 Rules & Regulations definitions

The Licence Agreement and the Certificate Agreement (of which the Rules & Regulations form an integral part) make use of numerous terms with defined meanings. For a proper understanding of the contracts, it is important to be familiar with the definitions of these terms. The 'General Rules & Regulations Part II' of both the Licence Agreement and the Certificate Agreement contain the definitions, in alphabetical order.

7 Process descriptions

The following paragraphs provide a brief description of the processes associated with the roles defined in the R&R. It is, of course, possible for a given institution to perform one or more roles, as indicated in the R&R. Similarly, a given role may be performed by one or more institutions. These descriptions do not pretend to be in any way exhaustive and serve only to give the basic picture.

7.1 Card production, personalisation and distribution

Before Cardholders can perform Chipknip value loading transactions or make Chipknip payments, they have to have a Chipknip card. This card is issued to the Cardholder by an Issuing Bank with which the Cardholder has a current account. The card has to be produced, personalised and distributed on behalf of the Issuing Bank. Cards are ordered (in bulk) by the Issuing Bank from a certified Card Supplier. The Card Supplier produces the cards to the Issuing Bank's design, adding the necessary logos to the card. In addition to ordering production of the card, the Issuing Bank sends a card preparation request to a certified Issuing Processor. The Issuing Processor, acting on the card preparation request, generates a PIN and PIN mailer and sends a personalisation instruction to a certified Card Personaliser (designated by the Issuing Bank). The Card Personaliser personalises the card received from the Card Supplier. The personalised card is either returned to the Issuing Bank or sent directly to the Cardholder on behalf of the Issuing Bank. The PIN mailer is sent to the Cardholder by the Issuing Processor on behalf of the Issuing Bank. Prepared cards not satisfying all the requirements are destroyed in bulk by a certified Card Destroyer.

The above description applies to account-linked Chipknip cards. Non-account-linked, or prepaid, Chipknip cards also exist. These cards are loaded only once with a certain value by the Card Personaliser on behalf of the Issuing Bank. Prepaid cards do not have a PIN and therefore cannot be topped up by the Cardholder. The card is not personalised either and becomes worthless when the prepaid value has been used up.

7.2 Terminal production, supply and connection

For Cardholders to be able to perform Chipknip value loading transactions involving a Loading Device Holder, the Loading Device Holder has to have a ULD Terminal. Loading Device Holders that are not Chipknip Licensees first have to enter into an agreement with their bank (Issuing Bank). A ULD Terminal will be supplied to the Merchant by a certified Terminal Supplier. The Terminal Supplier is required to build a ULD Terminal according to detailed terminal specifications drawn up by the Issuing Processor. The Issuing Processor is the institution that will process all the transactions originating from the ULD Terminal on behalf of the Issuing Bank. The detailed terminal specifications satisfy the Chipknip B.V. generic standards with respect to security, presentation and functionality.

To connect the ULD Terminal to the Issuing Processor's system, the Loading Device Holder has to have a data communication connection provided by a certified Data Communications Provider.

For Cardholders to be able to perform Chipknip payment transactions involving a Merchant, the Merchant has to have a Point-Of-Sale Terminal. A POS terminal will be supplied to the Merchant by a certified Terminal Supplier. The Terminal Supplier is required to build a POS Terminal according to detailed

terminal specifications drawn up by the Acquiring Processor. The Acquiring Processor is the institution that will process all the transactions originating from the POS Terminal on behalf of the Merchant's Acquiring Bank. The detailed terminal specifications satisfy the Chipknip B.V. generic standards with respect to security, presentation and functionality.

To connect the POS Terminal to the Acquiring Processor's host system, the Merchant has to have a data communication connection provided by a certified Data Communications Provider.

7.3 SAM supply and personalisation

For Chipknip payments to be possible, a Merchant has to have a POS Terminal. This POS Terminal must be fitted with a Secure Application Module (SAM). The SAM card carries a cash register or collector chip in which the payment details of the transactions that have been executed are stored along with the total of the payments made to the Merchant and details of cards which have been blocked. The SAM is ordered by the Terminal Supplier from a certified SAM Personaliser. The SAM Personaliser holds a stock of SAMs ready for personalisation when a personalisation request is received from a Terminal Supplier. On receipt of the personalised SAM, the Terminal Supplier installs it in the terminal and delivers the terminal to the Merchant.

7.4 Chipknip card loading

A Cardholder wishing to top up the value stored in his or her electronic purse (Chipknip card) inserts the Chipknip card into a certified ULD Terminal held by a Loading Device Holder. After the Cardholder has entered the PIN (which the ULD Terminal validates against the chip) and the amount to be loaded, the machine asks the Cardholder to confirm the transaction (by pressing 'YES'). The terminal then sends an authorisation request for the top-up transaction to the Issuing Processor. The Issuing Processor checks the authorisation request syntax and forwards the request to a certified Switch. If, however, the authorisation request originates from a Cardholder whose bank is the same as the bank for which the Issuing Processor operates, the authorisation request can be processed directly by the Issuing Processor. This is referred to as an 'on-us' transaction. If, for some reason, the Issuing Processor is unable to process the authorisation request itself even in the case of an on-us transaction, the Switch will again be used. The Switch is linked to the authorisation system of the Issuing Bank of the Cardholder making the top-up request (operated by the Issuing Processor). After the top-up request has been authorised, the reply message ('Chipknip loaded') is sent back to the terminal by the same route. The terminal then sends the details of the successful card loading transaction to the Issuing Processor which forwards them to the Cardholder's Issuing Bank so that the Cardholder's account can be debited and the float account and e-purse account can be updated.

7.5 Chipknip payment

A Cardholder wishing to pay a Merchant for products or services using a Chipknip card inserts the card into the Merchant's certified POS Terminal, which has been supplied to the Merchant by a Terminal Supplier. The POS Terminal requests the Cardholder to confirm the transaction. On confirmation, the amount is debited from the remaining value on the card. The transaction details are stored in the SAM card installed in the POS Terminal. At least once every two weeks, the POS Terminal sends a total of the transactions to the Acquiring Processor via a data communication connection provided by a Data

Communications Provider. The Acquiring Processor submits all the transactions to a certified Clearing House. The Clearing House collects and redistributes the received transaction details (clearing operation) between Acquiring Bank and Issuing Bank, leading to the financial settlement of transactions. The Issuing Bank debits the float account and updates the e-purse account. The Acquiring Bank credits the Merchant's account. Settlement between Issuing Bank and Acquiring Bank is accomplished via the DNB organisation on the basis of the transaction details supplied by the Clearing House.