Best Buy Canada Mobile

Credit, Debit, EMV Feature Document

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1. FEATURE OVERVIEW

1.1 Feature Description

The Credit Feature Document describes the screen flow that is used to accept a credit card as tender to pay for all or part of the balance due on a transaction.

1.2 Assumptions

1. All credit card types do not allow over-tendering.

2. If no payment device associated with the device, the system does not recognize that a card is inserted or swiped on the payment device.

3. In order for the debit and EMV processing to be initiated, a payment device needs to be associated with the device.

4. The Payment Device Authorization Service controls additional prompting required for the card type, for example entering of the PIN number, swiping card, acceptance of amount to tender, remove card.

5. EMV is an indicator on the swiped data.

6. Debit card types are not allowed to be manually entered into the capture card details. This is controlled by a parameter for the card type.

7. The dual processing indicator within the card details on the card is controlled by AJB.

8. The EMV indicator within the card details is controlled by AJB.

9. The prompting of the acceptance of the amount to tender is controlled by AJB.

10. The card expiration date processing is handled by the system.

11. EMV is an entry method not the card type. The card continues to have a card type distinction for example Visa, Mastercard, Debit.

12. Maximum transaction amount is validated when Total is selected.

13. Minimum amount for all tenders is $0.01.

14. Maximum amount for all tenders is $99,999.99

15. All text displayed by the system is configurable by brand to support multi-language. Text is defined from an external source or defined within the system.

1.3 Parameters and System Settings

Parameter Mnemonic	Description	Valid Values
Not Accept for Sale by Card Type	Determines which card type (such as MasterCard, Visa, PLCC, etc) is available for tendering. The card type is determined by BIN range. This is not for the displaying of the Credit tender option, but further defined by specific card type.	• On • Off
Offline Floor Limit by Card Type	Determines the offline floor limit for card type when timeout or offline occurs during authorization.	Dollar value
Signature Required for Credit Card Type (non-EMV)	Determines if a signature is required on a card type when the amount to authorize is less than a configurable dollar value. **Note**: If the entry method is EMV, the requirement for signature is returned in the authorization decision and will not look at this attribute on the card type.	Dollar value
Manual Signature Allowed for Tender	Determines if the capture manual signature option is available when collecting signature for tender.	• On • Off

Parameter Mnemonic	Description	Valid Values
CID/CVV Prompt by Card Type for Manual Entry	Determines which card type when the account information is manually entered requires the CID/CVV/CVV2 prompt. For example, Visa credit card requires CID prompt only when the card is manually entered but mastercard may not require. Note: If the card is swiped, the CID/CVV prompt does not happen.	•
Allow Card Details to be Manually Entered by Card Type	Determines by card type (ie, Visa, Mastercard, American Express, Debit) if the account number and expiration date can be manually entered.	• On • Off
Manual Capture Credit Card Account Number Manager Override	Determines if manager override is required when the card's account number is manually captured	• On • Off
Call for Referral Manager Override	Determines if manager override is required when the authorization response is call for referral.	• On • Off
Finance Credit Card	Determines if the card is a financeable credit card type.	• On • Off
Employee Upcharge Percentage for Tender	Determines by tender and card type if an additional fee is to be applied to the to the transaction. The amount is based upon the total amount to be charged to the tender/card type and the percentage associated with the tender/card type. For example Visa Credit Card has .05 employee upcharge amount and Mastercard Credit Card has .03 employee upcharge amount, if the charge amount is $100 for each, then an employee upcharge item of $5.00 and employee upcharge item of $3.00 are added to the transaction. If the tender/card type requires authorization, the amount to authorization is updated to include the employee upcharge amount. **This is checked and added during the adding of each tender to the transaction.**	• Value on Card Type
Employee Upcharge Item	Determines the item ID that is added to the transaction when tender requires an employee upcharge. The calculated amount is added as the price for the item. The same Item is used for any employee upcharge to add	• Item ID
PreAuth Allowed	IBH setting to allow PreAuth capability for a credit tender	• On • Off
Customer Not Presenet	IBH setting to allow Customer Not Present capability for a credit tender	• On • Off
PreAuth Manager Override	Determines if manager override is required when PreAuth is selected	• On • Off
Customer Not Present Manager Override	Determines if manager override is required when Customer is not Presenet	• On • Off

1.4   Interfaces

Interface	Description
Mobile Payment Devices	External device used for EMV smart card payment system for credit, debit and ATM cards.
Payment Authorization Service	Payment Authorization service that manages the processing of certain types of cards (Debit, EMV) and authorizes the tender amount to apply to the card.

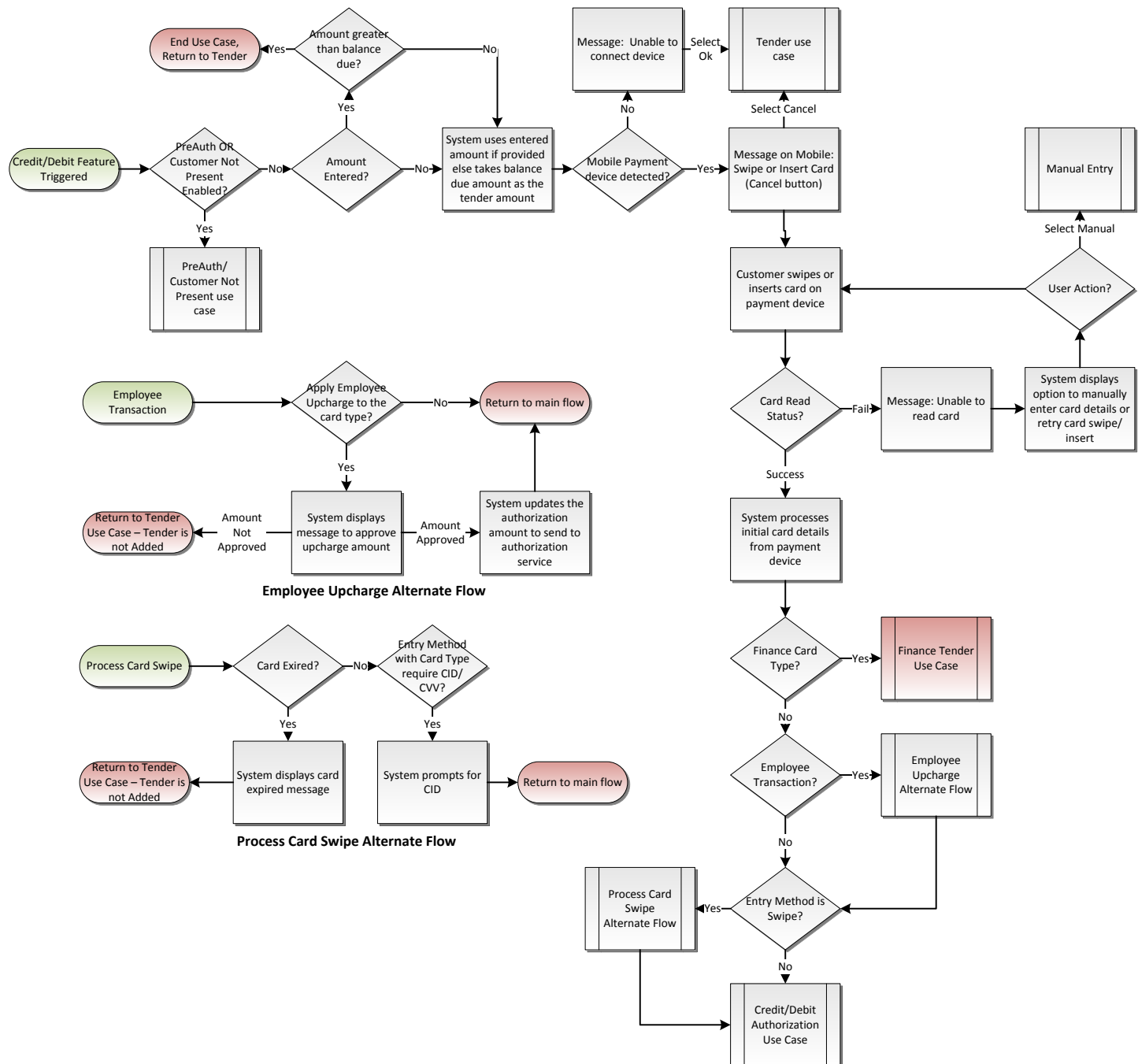## *2. USE CASE: CREDIT*

2.1 Feature Flow

Figure 1: Identify Card

2.2 Precondition

- Credit/Debit tender is selected.

- Payment device is associated with the mobile device

2.3 Main Flow

1. If the PreAuth or Customer Not Present functionality is enabled, the PreAuth or Customer Not Present Use Case (section 3) executes.

2. The Amount to Authorize alternate flow is executed.

3. If a payment device is not detected, the system displays a message; the operator acknowledges the message, the use case ends and the system returns to the Tender Use Case (section 11).

4. The system notifies the payment authorization service of tendering.

5. The system displays a message indicating authorization is in progress on the mobile device.

6. The system receives details on the card from the payment authorization service.

7. If the service returns an error swiping/inserting the card, the Error on Swipe/Insert Alternate Flow is executed.

8. If the service returns card manually entered, system executes the Manually Capture Card Alternate Flow (section 2.4.3).

9. The system checks the following Card Type Attributes: Not Accept for Sale by Card Type.

10. The system validates the Card Type Attributes.

11. If the system fails validation on a Card Type Attribute, the system displays a message, the operator acknowledges the message, the use case ends and the system returns to the Tender Use Case.

12. If the card type is DCS-Visa or DCS-PLCC, the system executes the DCS Tender Use Case (R10_BBY_xPOS_DCS PLCC w FiPay).

13. If the card type is finance card, the use case ends and the system executes the Finance Tender use case (section 11).

14. If the transaction type is employee transaction, the Tender Employee Transaction alternate flow is executed.

15. If the entry method is swipe, the Swipe Card Process alternate flow is executed.

16. The system executes the Tender Authorization Use case (section 4) with the Amount to Authorize.

2.4   Alternate Flows

2.4.1 Amount to Authorize

1. If the user did not enter in an amount to tender, the system uses the balance due as the Amount to Authorize and returns to the Main Flow where the system detects the payment device (bullet 3).

2. If the user did enter in an amount to tender, the system checks the entered amount against the balance due.

3. If the entered amount is greater than balance due, the system displays a message, the operator acknowledges the message, the use case ends and the system returns to the Tender use case (section 11).

4. The system accepts the entered amount as the Amount to Authorize.

5. The system returns to the Main Flow where the system detects the payment device (bullet 3).

2.4.2 Error on Swipe/Insert

1. The system displays a message. The operator acknowledges the message.

2. The system displays option to manually capture card details.

3. If the card is manually entered, the Manually Capture Card alternate flow is executed.

4. If the customer attempts to swipe or insert a card, the system returns to the Main Flow where the system receives details on the card (bullet 6).

2.4.3 Manually Capture Card

1. The system evaluates if manager override is required for manually capturing the card account number.

2. If the manager override is not required for manually capturing the card account number, the system returns to the Main Flow where it checks if the card type is eligible to be tendered in the transaction (bullet 9).

3. The system executes the Manager Override use case (section 11).

4. If the manager override is denied, the use case ends and the system returns to the calling use case.

5. If the Manager Override use case returns with an approved, the system returns to the Main Flow where it checks if the card type is eligible to be tendered in the transaction (bullet 9). **Note**: The manager override is not queued, as the manager override occurred after total is selected.

2.4.4 Tender Employee Transaction

1. The system checks if the card type requires an employee upcharge.

2. If no employee upcharge required, the system returns to the Main Flow where the system calls the Credit Authorization use case (bullet 16).

3. The system determines the employee upcharge amount based upon the amount to authorize and the percentage for the card type.

4. The system displays the message to user to confirm the employee upcharge amount.

5. If the employee upcharge amount is not accepted, the system returns to the Tender use case without a tender (section 11).

6. If the employee upcharge amount is accepted, the system adds the employee upcharge item to the transaction with the calculated employee upcharge amount. (**Note:** If the employee upcharge item requires tax to be applied, the tax is also added to the amount to authorize.)

7. The system adds the employee upcharge amount to the amount to authorize for the tender.

8. The system returns to the Main Flow where the system checks if the entry method is swipe (bullet 15).

2.4.5 Swipe Card Process

1. The system verifies that the card has not expired.

2. If the card is expired, the system displays a message, the operator acknowledges the message, the use case ends and the system returns to the Tender Use Case (section 11).

3. The system returns to the Main Flow where the system sends the authorization response (bullet 16).

2.5   Post Condition

- Card details have been captured.

2.6   Special Requirements

1. Tender amount is not required to be entered for Credit or Debit tender.

2. Valid card types for device are determined by the BIN range for the card number.

3. EMV card entry method is defined within the track details upon a swipe of a card.

4. Debit card type is defined within the card track details upon a swipe of a card or if the card number falls within the debit BIN range. A service code value of 120 or 220 in the swiped track 2 data (3 spaces after expiration date) indicates that the card is processed as debit for Canadian cards.

5. Swiping of the card happens on the payment device.

6. Additional prompting occurs on the payment device are controlled by the Payment Device Authorization Service. The following is a basic flow for credit EMV card on the payment device:

    - Prompt for Swipe/Insert
    - <Insert card>
    - Prompt for "Purchase $xx.xx OK?"
    - <Press OK>
    - Prompt for "Enter PIN"
    - <Enter PIN> press OK
    - Format online request
    - Receive online response
    - Display transaction result (e.g. APPROVED)
    - Prompt for card removal

7. The system does not read the card data from the Chip. The required card details (account number, expiration date, card type, entry method) are returned in the authorization response.

8. If required, the employee upcharge item is added to the transaction and the transaction totals are updated .

9. The system applies tax on the employee upcharge item per existing functionality. The tax code on the item determines if tax is applied and the amount.

10. The employee upcharge amount and any tax on the employee upcharge is added to the amount to authorize.

11. A separate employee upcharge item is added to the transaction for each employee upcharge that is required.

12. When a tender that required an employee upcharge item is voided, the employee upcharge item associated with the credit tender is voided automatically and the transaction totals are updated.

13. See section 13 *Appendix D: Process Flows* for some examples of the interaction with customer, payment device and mobile client.

2.6.1 Special Offline Requirements

TBD

2.6.2 Data Input/Output

Data Element	Description	Destination
Amount to Authorize	The final amount to authorize to the tender. The amount may change if the transaction type is employee and the card requires an upcharge to item to be added to the transaction.	• Payment Authorization Service
Manual Credit Card Details	The card details that are entered manually. • Account Number (full number in E-Journal and POSLog, masked number on Receipt)Expiration Date • Entry Method=Keyed (Keyed for POSLog, K for Receipt, no indication in E-Journal)	• Payment Authorization Service • E-Journal • POSLog • Receipt

3. USE CASE: PREAUTH OR CUSTOMER NOT PRESENT

3.1 Feature Flow
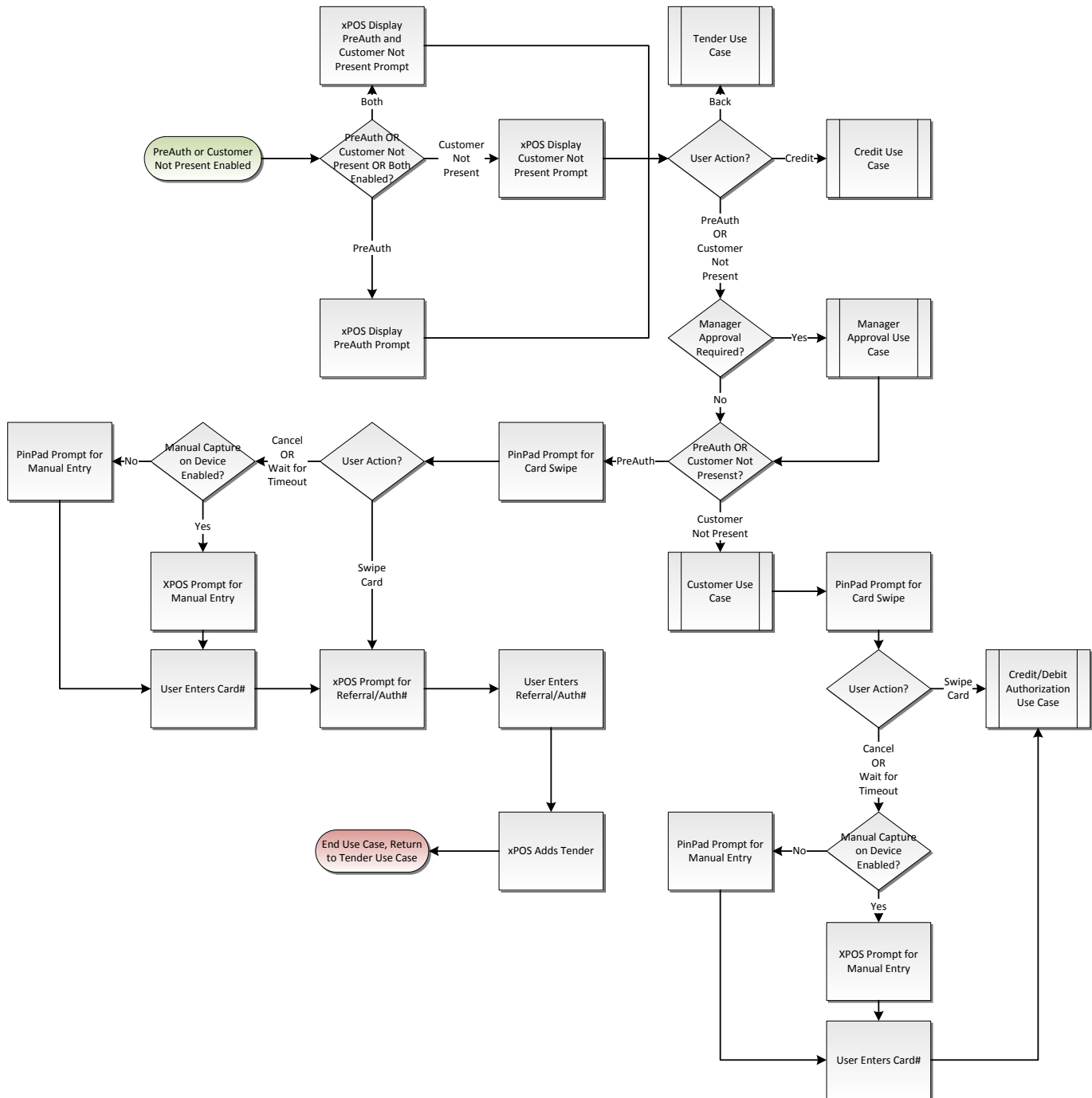
Figure 2: PreAuth or Customer Not Present

3.2 Precondition

- Credit/Debit tender is selected.
- Payment device is associated with the mobile device
- PreAuth or Customer Not Present is enabled.

3.3   Main Flow

1. If both PreAuth and Customer Not Present features are enabled, prompt defined in section 7.2.1.1 displays.

2. If Only PreAuth feature is enabled, prompt defined in section 7.2.1.2 displays.

3. If Only Customer Not Present feature is enabled, prompt defined in section 7.2.1.3 displays.

4. If User selects Back, use case ends and system returns to Tender Use Case.

5. If User selects PreAuth, system executes the PreAuth Alternation Flow (section 3.4.1).

6. If User selects Customer Not Present, executes the Customer Use Case.

7. After completing Customer Use Case, System captures account number and executes the Credit/Debit Authorization Use Case.

3.4   Alternate Flow

3.4.1 PreAuth Alternation Flow

1. System captures card number (swipe on PINPad or manually entered) and prompts for PreAuth number.

2. System adds tender to the transaction, use case ends and system returns to Tender Use Case.

4. USE CASE: TENDER AUTHORIZATION

4.1   Feature Flow

4.2   Precondition

- Credit Card details have been captured.

4.3   Main Flow

1. The system calls the tender authorizing service with the amount to authorize. **Note**: The amount to authorize may have been changed to account for employee upcharge.
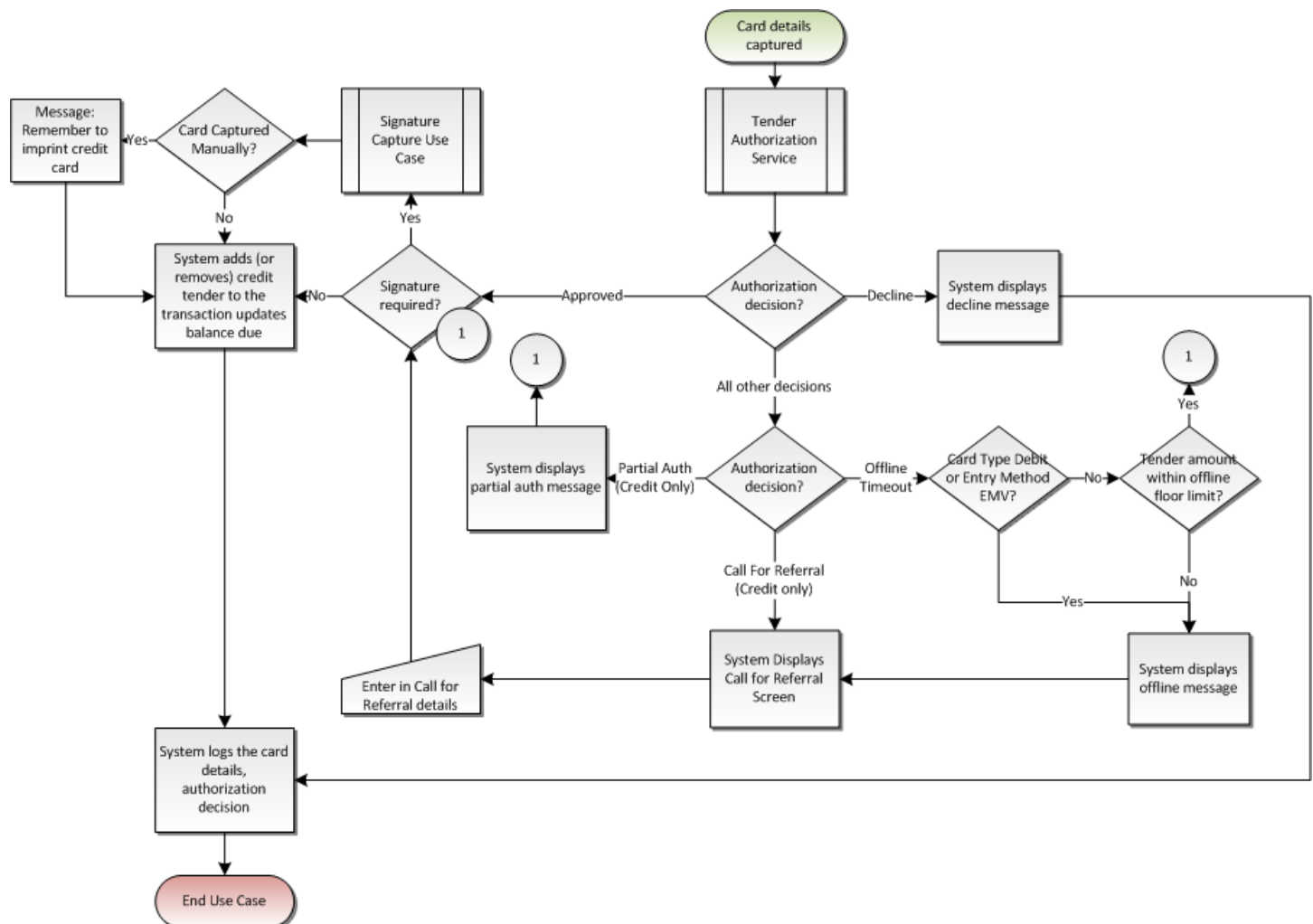
2. The system displays a message indicating authorization is in progress.

3. The system receives an authorized decision.

4. If the authorized decision is Approved, the Main Flow continues where the system checks if signature is required.

5. If the authorization decision is Declined, the Declined Authorization Decision alternate flow is executed.

6. If the authorization decision is Partial Authorization, the system displays a message, the operator acknowledges the message and the Main Flow continues where the system checks if signature is required.

7. If the authorization decision is Offline or Timeout, the Offline/Timeout Authorization Decision alternate flow is executed.

8. If the authorization decision is Call for Referral, the Call for Referral Authorization Decision alternate flow is executed.

9. The system checks if the credit card was captured manually.

10. If the credit card was captured manually, the system displays a message; the operator acknowledges the message and the Main Flow continues where the tender is added to the transaction.

11. The system adds the tender to the transaction and updates the Balance Due amount.

12. The system journals and logs the card number, authorization, call for referral and/or signature details.

13. The use case ends and the system returns to the Tender use case.

4.4   Alternate Flows

4.4.1 Declined Authorization Decision

1. The system journals the authorization decision.

2. The system displays a message, the operator acknowledges the message, the use case ends and the system returns to the Tender use case without adding the tender.

4.4.2 Offline/Timeout Decision

1. If the entry method is EMV, the system displays a message, the operator acknowledges the message, the use case ends and the system returns to the Tender use case without adding the tender.

2. The system checks the offline floor limit for the card type.

3. If the tender amount is above or equal to the offline floor limit, the Call for Referral alternate flow is executed.

4. If the tender amount is below the offline floor limit, the system approves the tender.

5. If the card type is DCS PLCC or DCS Visa, system Sends a 111 request to authorization system as defined in R10_BBY_xPOS_DCS PLCC w FiPay.

6. System returns to the Main Flow where it checks if the signature is required.

4.4.3 Call for Referral Authorization Decision

1. The system prompts to capture the call for referral details.

2. The operator enters in the details and accepts the entry.

3. The system checks if manager override is required to continue the call for referral process.

4. If the manager override is not required for manually capturing the card account number, the system returns to the calling use case to check for card type.

5. The system executes the Manager Override use case.

6. If the manager override is denied, the use case ends and the tender is not added to the transaction.

7. If the Manager Override use case returns with an approved, the system returns to the calling use case to check for card type. **Note**: The manager override is not queued, as the manager override occurred after total is selected.

4.5 Post Condition

- Tender is authorized.

4.6 Special Requirements

1. The capture signature parameter for card type is the same if the card was manually entered or swiped.

2. The prompting for signature when the entry method is EMV is determined by the authorization response and is not based upon other settings for the card type.

3. As a tender is added the signature is captured, no consolidation of credit tenders is done.

4. There is no validation done on the call for referral details.

5. A store copy receipt is printed to manually imprint the card for the cases identified in the table in the Receipt Generation document.

6. The Call for Referral manager override is prompted after the operator has entered in the details.

7. If the tender is not authorized, any additional items added during the tender process (employee upcharge item or administrative fee item) are removed from the transaction.

8. Increased timeout is required for EMV and Debit processing.

9. A store copy receipt is printed to manually imprint the card for the cases identified in the table in the Receipt Generation document.

10. The system does not read the card data from the Chip. The required card details (account number, expiration date, card type, entry method) are returned in the authorization response.

11. See section 13 *Appendix D: Process Flows* for some examples of the interaction with customer, payment device and mobile client.

4.6.1 Special Offline Requirements

TBD

4.6.2 Data Input/Output

Data Element	Description	Destination
Authorization Decision	The decision returned from the authorization service.	• E-Journal • POSLog • Receipt
Call for Referral details	The entered approval number and approval amount.	• E-Journal • POSLog • Receipt
Entry Method (POSLog)	If the card was manually entered, a 'Keyed' is logged. If the card was swiped, an 'MSR' is logged.	• POSLog
Entry Method (Receipt)	If the card was manually entered, a 'K' is logged. If the card was swiped, an 'S' is logged.	• Receipt
Settlement Tag Data	The tag data returned in the payment device authorization service respoinse.	• POSLog • E-Journal
Swiped Credit Card Details	The card details collected through track data on the swipe. • Account Number (full number in E-Journal and POSLog, masked number on Receipt) • Expiration Date (format MM/YY) • Entry Method=Swiped (MSR for POSLog, S for Receipt, no indication in E-Journal)	• E-Journal • POSLog • Receipt

Data Element	Description	Destination
Manual Credit Card Details	The card details that are entered manually. • Account Number (full number in E-Journal and POSLog, masked number on Receipt)Expiration Date • Entry Method=Keyed (Keyed for POSLog, K for Receipt, no indication in E-Journal)	• E-Journal • POSLog • Receipt

5. USE CASE: SIGNATURE CAPTURE (TENDER)

5.1 Feature Flow
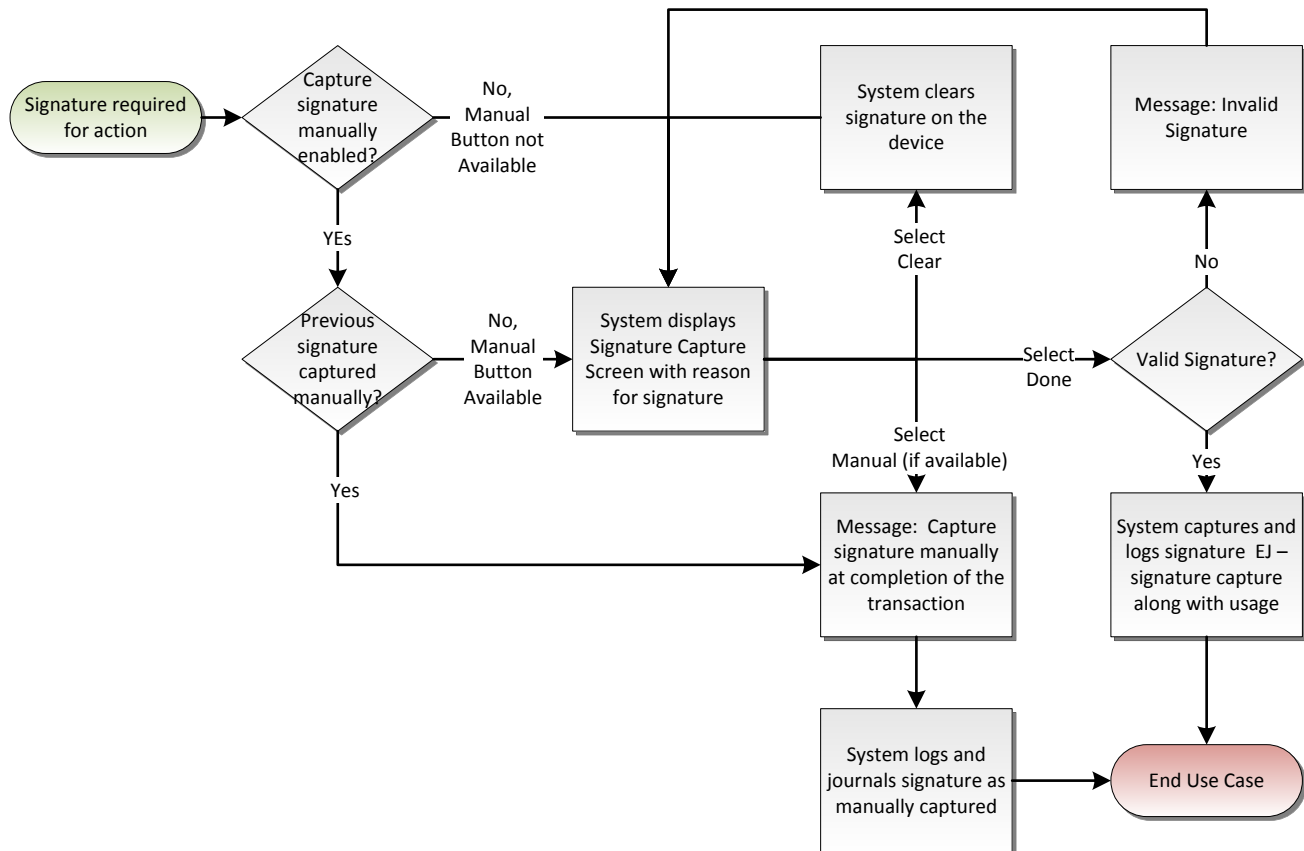
5.2 Precondition

• Signature required for a tender.

5.3 Main Flow

1. The system checks if the Manual Signature Allowed for Tender parameter is enabled.

2. If the parameter is disabled, the Main Flow continues where the system prompts the operator to obtain a signature from the customer without the option to select Manual.

3. The system checks if a previous signature was captured manually.

4. If a previous signature was captured manually, the Capture Signature Manually alternate flow is executed.

5. The system prompts the operator to obtain a signature from the customer.

6. If the operator or customer selects to capture the signature manually, the Capture Signature Manually alternate flow is executed.

7. The customer signs the device and accepts the entry.

8. If the operator or customer selects to clear the signature, the system refreshes the screen, the signature is removed and the system restarts the Main Flow.

9. If the operator accepts the entry and fails to provide the required signature, the system displays a message, the operator acknowledges the message and the system restarts the Main Flow.

10. The system validates the signature by validating against minimum required length.

11. If the signature does not meet the minimum required length criteria, the system displays message, the operator acknowledges the message, the signature is cleared and the system restarts the Main Flow.

12. If the signature meets the minimum required length criteria, the system logs the signature captured and the reason for the signature.

13. The use case ends and the system returns to the calling use case.

5.4   Alternate Flows

5.4.1 Capture Signature Manually

1. The system displays a message.

2. The operator acknowledges the message.

3. The system journals and logs the manual signature indicator and signature reason.

4. The use case ends and the system returns to the calling use case.

5.5   Post Condition

*   A signature is captured for a tender.

5.6   Special Requirements

1. Minimum required length of a signature is not parameterized but a standard 25 points.

2. Any signatures captured electronically are deleted and the customer is forced to manually sign a signature receipt.

5.6.1 Special Offline Requirements

TBD

5.6.2 Data Input/Output

Data Element	Description	Destination
Signature	The signature captured from the customer.	• POSLog
Signature Reason	The reason details for the signature, such as Credit Tender.	• POSLog • E-Journal
Manual Signature Indicator	Indicates that the signatures in the transaction are captured manually.	• POSLog
** MANUAL SIGNATURE CAPTURED**	Text to write in the E-Journal for each signature reason that is captured manually.	• E-Journal
Signature Reason, Signature Line	The signature reason and signature line is printed on the store copy of the receipt when signatures are required to be captured.	• Receipt - Store Copy

6. SUPPLEMENTAL SPECIFICATIONS

6.1 Check Digit Feature

The Check Digit feature is executed to verify the account number entry.

6.2 Electronic Journal

Electronic journal mockups for this feature are documented in the Electronic Journal document.

6.3 Finance Tender

The Finance Tender feature is executed if the card entered/swiped is a Finance Credit card type.

6.4 Manager Override

The Manager Override feature document is executed for each of the following cases when enabled:

- Call for Referral
- Manually capture credit card account number

6.5 POSLog

POSLog mockups for this feature are documented in the POSLog document.

6.6 Printed Receipts

Printed receipt mockups, where applicable, are documented in the Receipt Generation document.

6.7 Tender Void

The tender void feature is updated to require the customer to swipe the card again if the tender is selected to be voided.

7. SCREEN LAYOUTS

7.1 Credit, Debit and EMV Authorization Messaging

The following messages are displayed when the Credit/Debit tender option is selected and/or card is swiped or inserted on the payment device and errors occur with that processing. These messages are the same messages that come up when processed during from the Enter Credit/Debit Card screen when entering in card manually.

7.1.1 No Payment Device Detected

Description	The message is displayed when there is no payment device associated with the mobile device. Acknowledging the alert returns the operator to the calling use case.
Message	No payment device detected
Key prompt	OK
Notes	Configurable message

7.1.2 Waiting for Swipe or Insert Card

Description	The message is displayed on the mobile device when the Credit/Debit option is selected from the tender menu system identifies that the card that is swiped is an EMV card needs to be inserted in order to process the authorization for it. If a card is inserted, the message is removed from the screen and the system returns to the authorizing screen. If the operator selects Cancel, the operator returns to the calling use case.
Message	Waiting for customer to swipe or insert card
Key prompt	Ok
Notes	Configurable Message

7.1.3 Credit Card Expired

Description	The credit card expired message is displayed when the card has expired. Acknowledging the message returns the operator to the Capture Credit Card Details screen
Message	Card is expired.
Key prompt	Ok
Notes	Configurable message

7.1.4 Invalid Card

Description	The invalid card message is displayed when the card is swiped and is unable to be read. Acknowledging the message returns the operator to the Capture Credit Card Details screen.
Message	Invalid card.
Key prompt	Ok
Notes	Configurable message

7.1.5 Amount Exceeds Balance Due

Description	The Amount Exceeds Balance Due message is displayed when the card type does not allow over-tendering. Acknowledging the message returns the operator to the Capture Credit Card Details screen.
Message	Card does not allow tender to exceed balance due.
Key prompt	Ok
Notes	Configurable message

7.1.6 Not Accept for Sale by Card Type

Description	The Not Accept for Sale by Card Type for Device message is displayed when the card that is swiped/entered is not allowed on the device type. Acknowledging the message returns the operator to the Capture Credit Card Details screen
Message	Card not accepted for sale.
Key prompt	Ok
Notes	Configurable message

7.1.7 Accept Employee Upcharge

Description	The Accept Employee Upcharge message is displayed if the transaction is of type employee and the card type requires an employee upcharge to be added to the transaction informs the operator that the data entered in the required fields is invalid (e.g. incorrect format, missing). The <ARG1> described in the Message is replaced with the name of the card type. The <ARG2> described in the Message is replaced with the employee upcharge amount.
Message	Do you accept the Upcharge of <ARG2> to your <ARG1> card for the Employee Purchase
Key prompt	• Yes – Continue with Tender Employee Transaction alternate flow • No – Tender use case, without adding the tender to the transaciton
Notes	Configurable message

7.2   PreAuth and Customer Not Present Prompt

The PreAuth/Customer Not Present prompt appears when features are enabled and the credit/debit tender s is selected.

7.2.1 Mockups

7.2.1.1. Both PreAuth and Customer Not Present Enabled
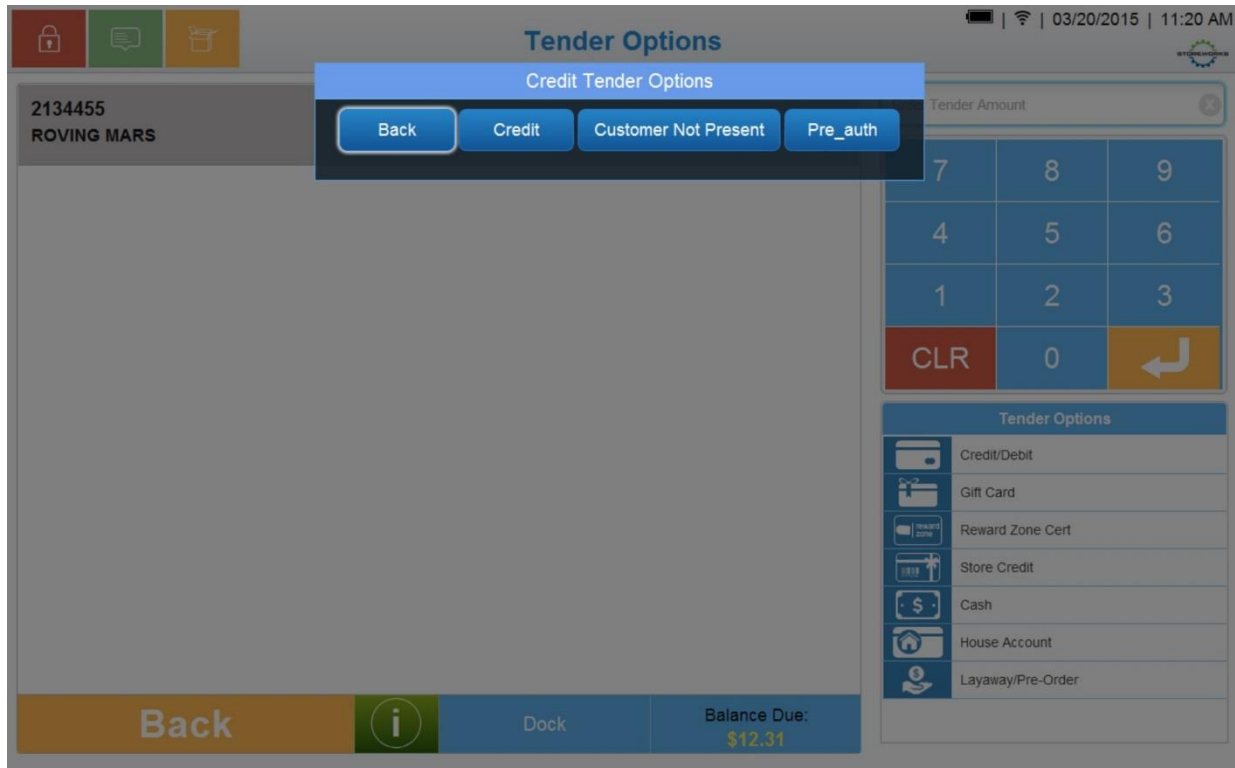
7.2.1.2. Only PreAuth Enabled
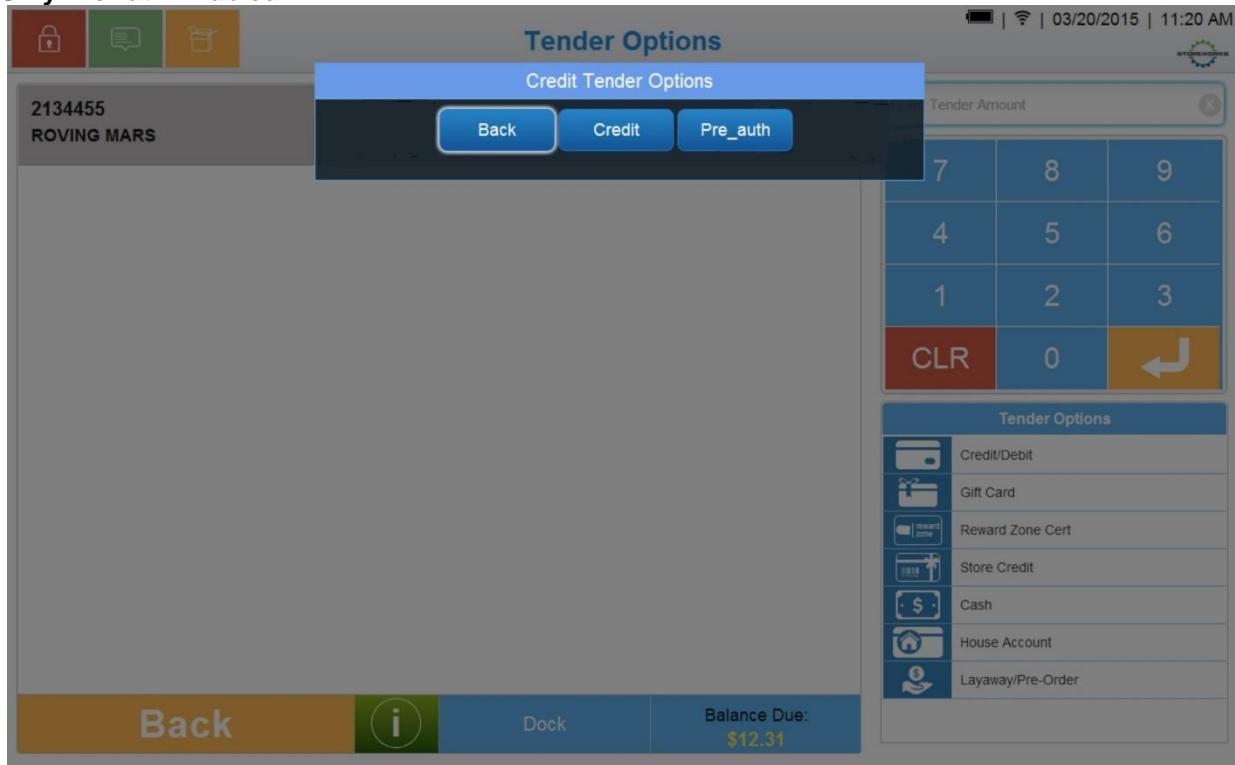
7.2.1.3. Only Customer Not Present Enabled
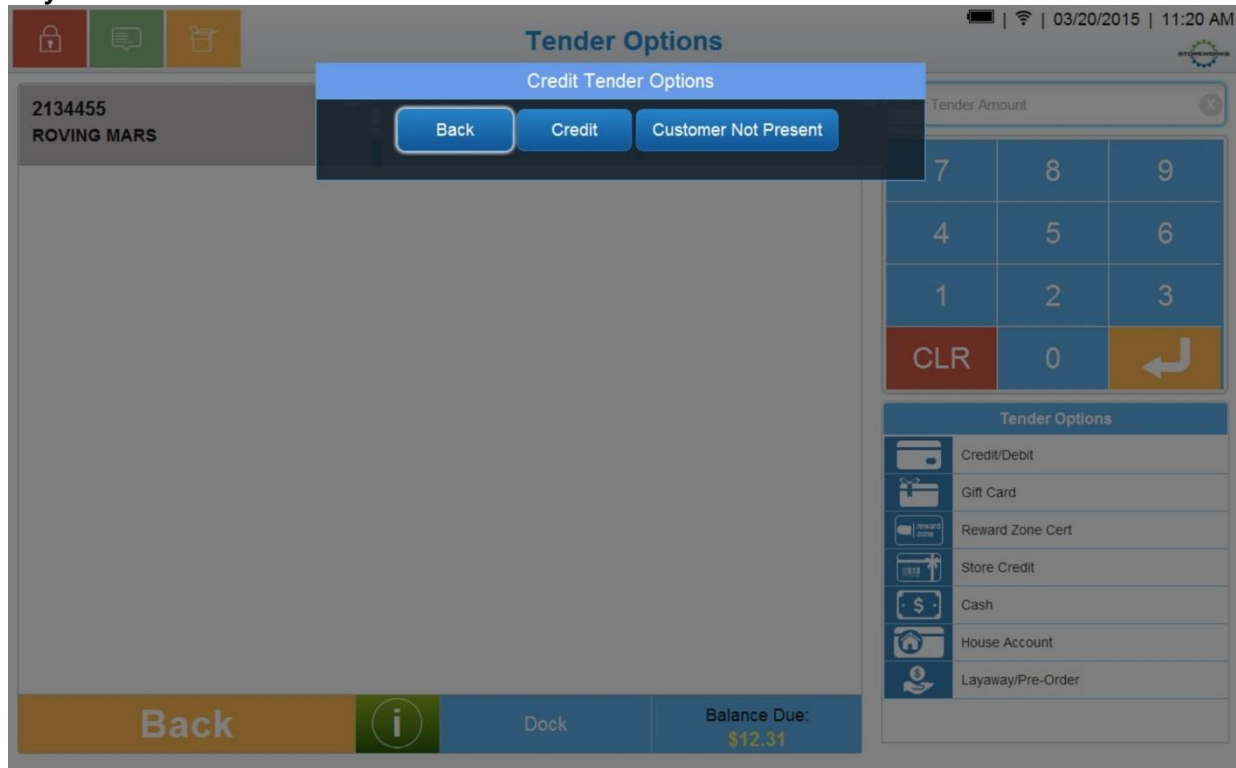
7.2.2 Prompt Text

Instructions
Credit Tender Options

7.2.3 Navigation/Menu Key

Label	State	Next Screen	Notes
Back	Enabled	• Tender Use Case	Text on button is configurable
Customer Not Present	• Enabled if feature enabled • Not visible if feature not enabled	• Customer Use Case	Text on button is configurable
Pre_Auth	• Enabled if feature enabled • Not visible if feature not enabled	• Capture Card Number	Text on button is configurable

7.3   Enter Credit/Debit Card

The Capture Credit/Debit Card Number screen appears when the operator selects the tender Credit/Debit and PreAuth and Customer Not Present not enabled or selects Credit/Debit from the PreAuth/Customer Not Present Prompt and prompts to swipe or insert a credit or debit card or enter the card details manually. Swiping or inserting (when payment device is paired to mobile device) a card implies an entry.

7.3.1 Mockup
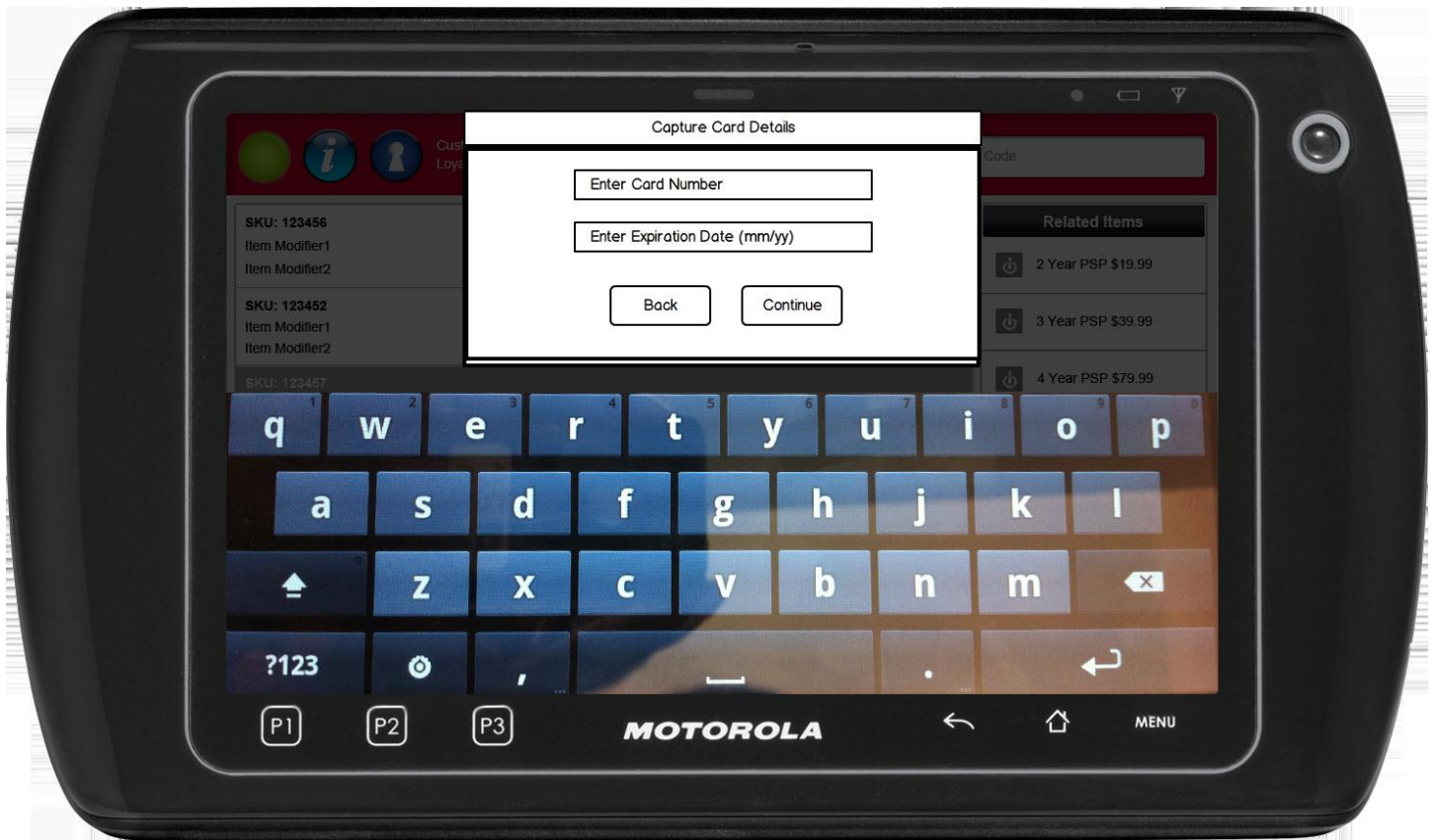
Figure 3: Enter Credit or Debit Card

7.3.2 Instruction Text

Instructions
Capture Credit/Debit Card Details

7.3.3 Navigation/Menu Key

Label	State	Next Screen	Notes
Back	Enabled	• Tender Use Case	None
Continue	Enabled	• Card Type of Credit: Capture CID • Card Type of EMV: EMV Use Case • Card Type of Debit: Debit Use Case • Invalid Card Type: Tender Use Case • Card Type Cannot be Manually entered: Card Cannot be Manually Entered	None

7.3.4 Data/Input Field

Label	Editable	Req'd?	Data Type	Min Length	Max Length	Notes
Enter Account Number	Yes	See Notes	Numeric	1	20	If manually capturing credit or debit card, the field is required. If the card is swiped, the fields are not required.
Enter Expiration Date	Yes	See Notes	Date	7	7	Format is MM/YY If manually capturing credit card, the field is required. If the card is swiped, the fields are not required.

7.3.5 Reason Code

Reason Code	Valid Values	Default Value
None		

7.3.6 Invalid Data Notice

Description	The Invalid Data Notice informs the operator that the data entered in the required fields is invalid (e.g. incorrect format, missing). The <ARG> described in the Message is replaced with the name of the data field that contains the invalid data. If there are multiple data fields with invalid data, the system only displays the name of the first data field with invalid data. Upon acknowledging the message, the system returns to the previous screen.
Message	The following field has invalid data: <ARG>. Please correct the invalid data.
Key prompt	OK
Notes	This is a generic message to be reused when required data is incorrect or missing.

7.3.7 Card Cannot be Manually Entered

Description	The card cannot be manually entered message is displayed when the card type does not allow the details to be manually entered. Acknowledging the message returns the operator to the Capture Credit Card Details screen.
Message	Card cannot be manually entered
Key prompt	Ok
Notes	Configurable message

7.3.8 Credit Card Expired

Description	The credit card expired message is displayed when the card has expired. Acknowledging the message returns the operator to the Capture Credit Card Details screen
Message	Card is expired.
Key prompt	Ok
Notes	Configurable message

7.3.9 Amount Exceeds Balance Due

Description	The Amount Exceeds Balance Due message is displayed when the card type does not allow over-tendering. Acknowledging the message returns the operator to the Capture Credit Card Details screen.
Message	Card does not allow tender to exceed balance due.
Key prompt	Ok
Notes	Configurable message

7.3.10 Not Accept for Sale by Card Type

Description	The Not Accept for Sale by Card Type for Device message is displayed when the card that is swiped/entered is not allowed on the device type. Acknowledging the message returns the operator to the Capture Credit Card Details screen
Message	Card not accepted for sale.
Key prompt	Ok
Notes	Configurable message

7.3.11 Accept Employee Upcharge

Description	The Accept Employee Upcharge message is displayed if the transaction is of type employee and the card type requires an employee upcharge to be added to the transaction informs the operator that the data entered in the required fields is invalid (e.g. incorrect format, missing). The <ARG1> described in the Message is replaced with the name of the card type. The <ARG2> described in the Message is replaced with the employee upcharge amount.
Message	Do you accept the Upcharge of <ARG2> to your <ARG1> card for the Employee Purchase
Key prompt	• Yes – Continue with Tender Employee Transaction alternate flow • No – Tender use case, without adding the tender to the transaciton
Notes	Configurable message

7.4   Capture Additional Card Details

The Capture Additional Card Details screen appears when the credit card used as the tender. The screen appears for credit cards that are manually entered or swiped.
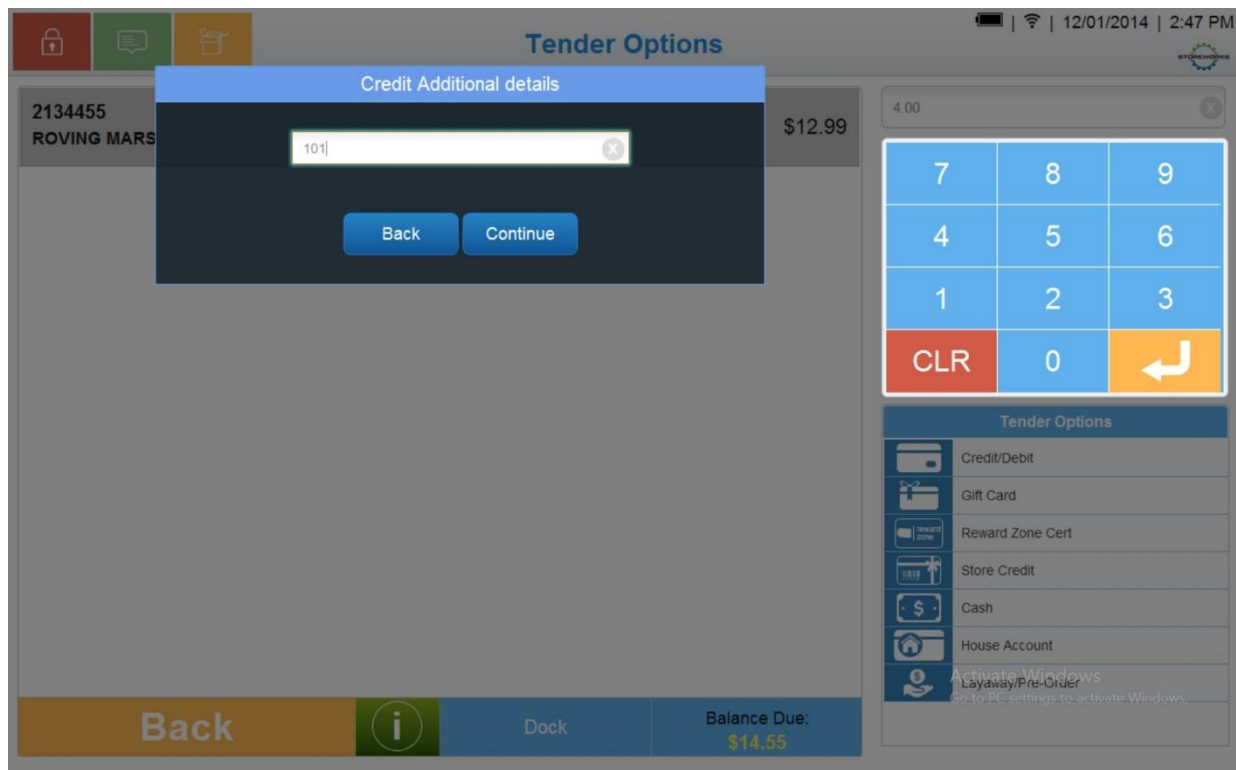
7.4.1 Mockup

Figure 4: Capture Additional Card Details

7.4.2 Instruction Text

Instructions
Call for Referral

7.4.3 Navigation/Menu Key

Label	State	Next Screen	Notes
Back	Enabled	• Tender Use Case	
Continue	Enabled	• Approved, Partial Auth with Signature required: Signature Capture (Tender) • Approved, Partial Auth with no Signature: Tender Use Case • Declined: Tender Use Case • Offline/Timeout, Call for Referral: Call for Referral	

7.4.4 Data/Input Field

Label	Editable	Req'd?	Data Type	Min Length	Max Length	Notes
Enter CID	Yes	Yes	Numeric	3	4	None

7.4.5 Reason Code

Reason Code	Valid Values	Default Value
None		

7.4.6 Invalid Data Notice

Description	The Invalid Data Notice informs the operator that the data entered in the required fields is invalid (e.g. incorrect format, missing). The <ARG> described in the Message is replaced with the name of the data field that contains the invalid data. If there are multiple data fields with invalid data, the system only displays the name of the first data field with invalid data. Upon acknowledging the message, the system returns to the previous screen.
Message	The following field has invalid data: <ARG>. Please correct the invalid data.
Key prompt	OK
Notes	This is a generic message to be reused when required data is incorrect or missing.

7.5 Authorizing

The Authorizing screen appears when the credit or debit tender is being authorized. The screen notifies the operator that authorization is occurring.

7.5.1 Mockup
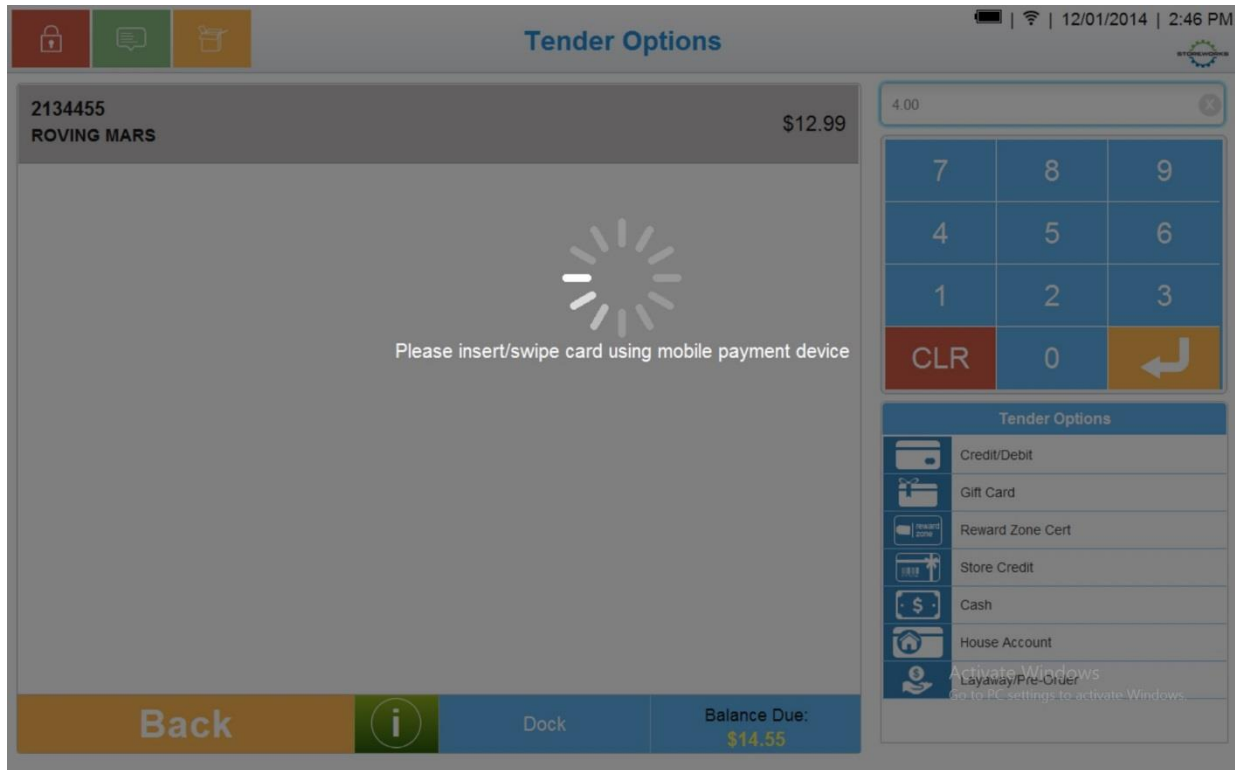
Figure 5: Authorizing

7.5.2 Instruction Text

Instructions
Authorizing…

7.5.3 Navigation/Menu Key

Label	State	Next Screen	Notes
None		●	

7.5.4 Data/Input Field

Label	Editable	Req'd?	Data Type	Min Length	Max Length	Notes
None						

7.5.5 Reason Code

Reason Code	Valid Values	Default Value
None	●	

7.5.6 Authorization Offline

Description	The Authorization Offline message is displayed when the response returns an offline or times out before receiving a response. The <ARG> is replaced with one of the following responses: "Gift card processor is offline." "The request has timed out." Upon acknowledging the message, the system displays the Call for Referral screen.
Message	The following error occurred during gift card authorization: <ARG>
Key prompt	OK
Notes	This is the same message used in Credit Card Authorization.

7.5.7 Declined

Description	The Declined message is displayed when the response returns a Declined response. The <ARG> is replaced with the error returned from the Authorizer (e.g. Insufficient funds). Acknowledging the alert returns the operator to the calling use case.
Message	The card was declined due to <ARG>
Key prompt	OK
Notes	This is the same message used in Credit Card Authorization.

7.5.8 Partial Authorization

Description	This alert is displayed when the credit authorization decision is partial authorized. Acknowledging the alert continues with
Message	
Key prompt	Ok
Notes	Configurable message

7.5.9 Manual Imprint

Description	The Manual Imprint message is displayed when the card was manually entered in instead of being swiped/inserted. Upon acknowledging the message, the system returns to the calling use case.
Message	Remember to imprint card.
Key prompt	OK
Notes	Configurable message

7.6   Call for Referral

The Call for referral screen is displayed when the authorization response is Call for Referral. The screen displays the phone number for the credit card and the merchant number and prompts the operator to enter the Approval number and the approved amount.

7.6.1 Mockup
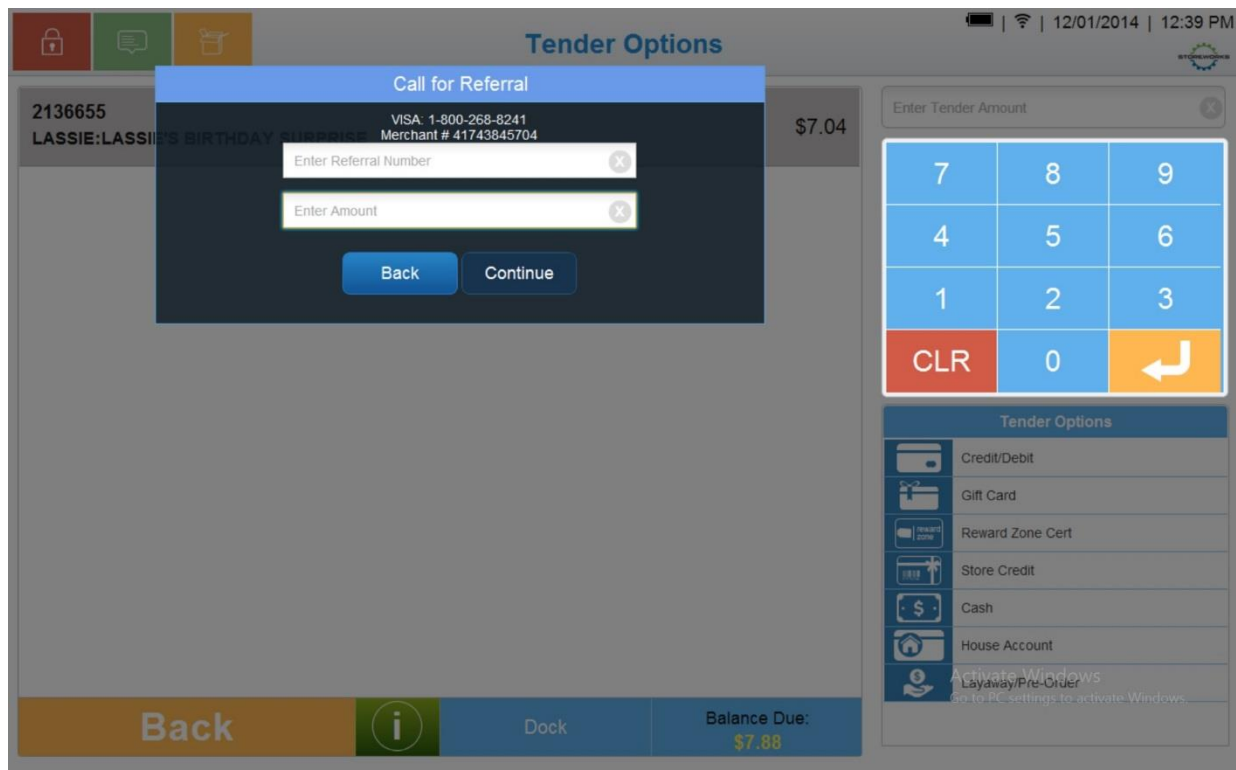
Figure 6: Call for Referral

7.6.2 Instruction Text

Instructions
Call for Referral

7.6.3 Navigation/Menu Key

Label	State	Next Screen	Notes
Back	Enabled	• Tender Use Case	None
Continue	Enabled	• Manager Override Required: Manager Override use case • Manager Override not required, Signature Required: Signature Capture (Tender) • Manager Override not required, Signature Not Required: Tender Use Case	None

7.6.4 Data/Input Field

Label	Editable	Req'd?	Data Type	Min Length	Max Length	Notes
Enter Approval Number	Yes	Yes	Numeric	1	TBD	None
Enter Approval Amount	Yes	Yes	Currency	4	12	None

7.6.5 Reason Code

Reason Code	Valid Values	Default Value
None		

7.6.6 Invalid Data Notice

Description	The Invalid Data Notice informs the operator that the data entered in the required fields is invalid (e.g. incorrect format, missing). The <ARG> described in the Message is replaced with the name of the data field that contains the invalid data. If there are multiple data fields with invalid data, the system only displays the name of the first data field with invalid data. Upon acknowledging the message, the system returns to the previous screen.
Message	The following field has invalid data: <ARG>. Please correct the invalid data.
Key prompt	OK
Notes	This is a generic message to be reused when required data is incorrect or missing.

7.7   Signature Capture (Tender)

The Signature Capture (Tender) screen is displayed when the credit card tender requires a signature.
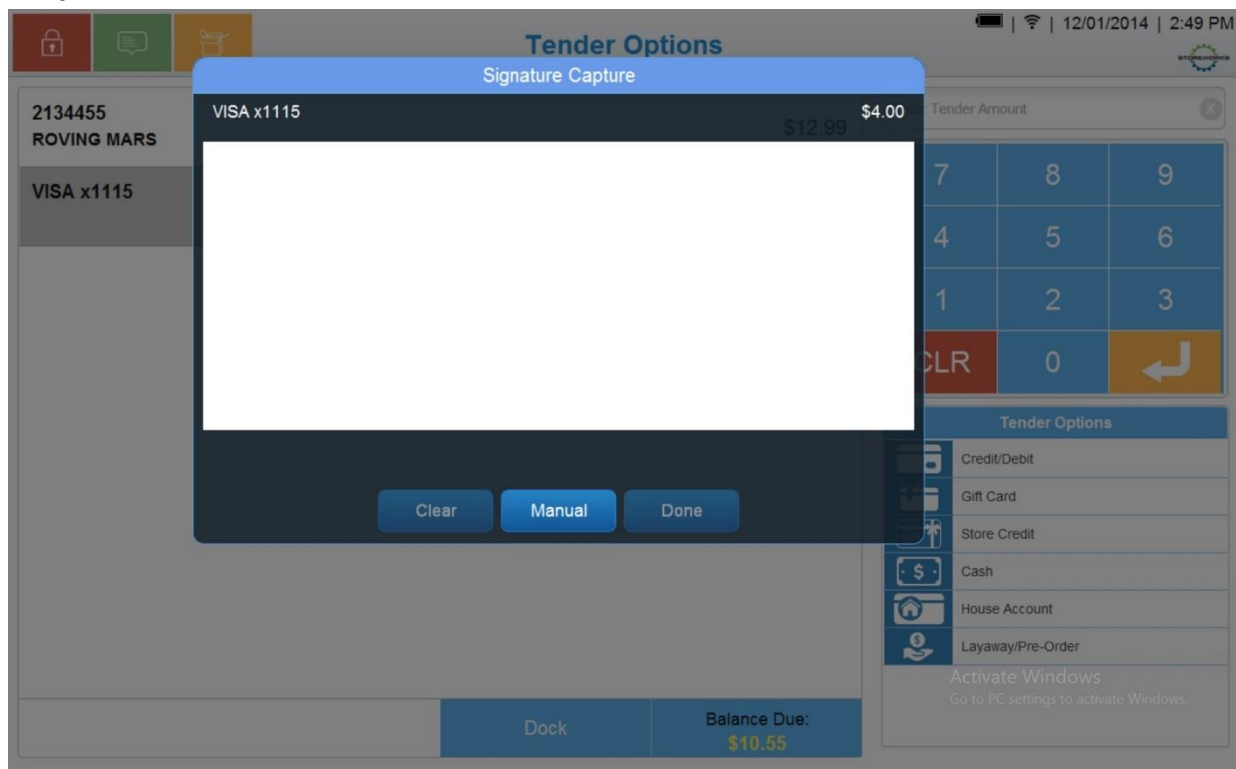
7.7.1 Mockup

Figure 7: Signature Capture (Tender)

7.7.2 Instruction Text

Instructions
Signature Capture
Credit Tender – "<Card Type> Credit <last 4 digits>" and "Total Credit Amt: $<tender amt>"

7.7.3 Navigation/Menu Key

Label	State	Next Screen	Notes
Done	See Note	• Signature capture does not meet minimum length or required data is missing: Invalid Signature • Signature capture meets minimum length: calling use case	Enabled when an entry is made.
Clear	See Note	• Signature Capture	Enabled when an entry is made.
Manual	See Note	• Capture Signature Manually	Displayed only if the Manual Signature Allowed for Tender parameter is enabled.

7.7.4 Data/Input Field

Label	Editable	Req'd?	Data Type	Min Length	Max Length	Notes
N/A	Yes	Yes	N/A	N/A	N/A	None

7.7.5 Reason Code

Reason Code	Valid Values	Default Value
Signature Type	• Credit Tender	Credit Tender – "<Card Type> Credit <last 4 digits>" and "Total Credit Amt: $<tender amt>"

7.7.6 Capture Signature Manually

Description	The Capture Signature Manually message is displayed when the operator selected to capture the manually. Acknowledging the message returns the operator to the calling use case.
Message	Capture signature manually when transaction is complete.
Key prompt	Ok
Notes	Configurable message

7.7.7 Invalid Signature

Description	The Invalid Signature message is displayed when the signature does not meet the minimum length required or the required information is not present. Acknowledging the message returns the operator to the previous screen.
Message	Invalid Signature
Key prompt	Ok
Notes	Configurable message

7.8 Dialog Messages/Message Boxes

7.8.1 Financing Prompt Message

Description	When POS determines that a tender is a DCS-Visa card, message displays to determine if finance plans need to prompt.
Message	Apply Financing to Tender
Key prompt	• Yes continues to current finance plan prompting process. • No continues tendering as a Visa.
Notes	• 'No' key has focus • Text for message box, Yes key, No key is configurable

8. BUSINESS SIGN OFF

Name	Organization	Date

9. REVISION HISTORY

Reviser	Revision	Date	Version
Amy Lackas	Initial document created. This version includes the following changes: Added Employee Upcharge, Finance Plan and the change to the Credit, Debit and EMV tender authorization process.	07/16/2013	1.0
Amy Byers	– Section 4.3: Removed reference to checking for signature as this is done at end of transaction not after each tender. – Removed former section 3.4.1 as checking for signature is done at end of transaction not after each tender.	10/6/2014	1.1
Amy Byers	– Section 1.3: Added parameters to enable PreAuth Feature, PreAuth Manager Approval, Customer Not Present Feature and Customer Not Present Manager Approval – Section 2.1: Updated flow to include PreAuth and Customer Not present functionality. – Section 2.3: Updated flow to include PreAuth and Customer Not present functionality. – Section 3: Added section to define PreAuth and Customer Not Present Functionality. – Section 7.2: Added PreAuth and Customer Not Present Prompt Mockups. – Section 7: Updated screen mockups with current versions.	3/30/2015	1.3

Amy Byers	– Section 2.3:
	  o Added to process Cancelled DCS cards through DCS authorization spec.
	  o Added executing DCS Tender Authorization use case
	– Section 11: Added DCS Authorization spec to list.
		4/25/16	1.4

Amy Byers	– Section 2.3: Removed to process Cancelled DCS cards through DCS authorization spec. – Section 4.4.2: Added sending 111 when offline approvals received. – Section 4.4.3: Added sending 111 when call for referral approvals received.	5/5/16	1.5
Amy Byers	– Sections 2.3 & 2.4.3: Updated flow for CR previously implemented to capture manual tender information on sig pad with FiPay – Section 10.2: Added PLCC DCS requirements and mapped them.	6/2/16	1.6

10. APPENDIX A: SOURCE DOCUMENTATION

- Requirement Specification - XPOS.xlsx

- PLCC for XPOS Requirements Specification_v4.xlsx

10.1 Functional Requirements

ID	Sub Category	Description	Section(s)
4.2	Tender	If multiple forms of tender are applied to the transaction that require the customer to provide their signature, all signature prompts will be queued until the entire transaction has been tendered.	• 4.3 Main Flow
4.2.1	Tender	A customer will be required to sign for each instance of a signature required MOP, however they will not sign after each tender, but once all tenders have been applied to the transaction.	• 4.3 Main Flow

10.2 Functional Requirements

Req ID	Description	• Section
FR1	XPOS shall be able to accept tendering of XPOS transactions using DCS Accord-D (Mastercard/Visa) and PLCC cards	• R10_BBY_xPOS_DCS PLCC w FiPay • 2.3 Main Flow
1.01	xPOS shall support insert, swipe, and manual entry for DCS Accord-D EMV Card	• BBYC_mPOS_R8_Tender FDoc • 1.2 Assumptions
1.02	xPOS shall support card swipe of PLCC, and manual entry of PLCC account number	• BBYC_mPOS_R8_Tender FDoc • 1.2 Assumptions
1.03	In the case of manual card entry, sigPAD shall prompt for the following: 1. Card Number 2. Expiry Date 3. CVV (DCS Accord-D Card only as PLCC does not have CVV)	• Not a POS requirement.
1.03.1	Manager override shall be required for manually captured card number	• 2.4.3 Manually Capture Card
FR2	PLCC shall be treated separately from the DCS Accord-D card. The PLCC shall be treated as a Financing card, and DCS Accord-D card shall be treated as either a Credit or Financing card	• R10_BBY_xPOS_DCS PLCC w FiPay
FR3	For DCS Accord-D cards, the Pin Pad shall display a prompt to customers and allow the option to choose whether to use the card for 1) Financing, or 2) Regular Credit	• Not a POS requirement.
3.01	The text and label on buttons on the prompt shall be configurable	• Not a POS requirement.
3.02	The need to prompt for Financing or Regular Credit shall be determined and handled by FiPay EPS by checking BIN range	• Not a POS requirement.
3.03	Upon selecting the Financing option, the tender shall be processed as DCS Financing AccordD. Upon selecting the Credit option, the tender shall be processed as Regular Credit (i.e. Visa/Mastercard depending on the card)	• Not a POS requirement.
4.01	User shall continue to have the ability to partial tender, financing on multiple plans on same card within same transaction	• R10_BBY_xPOS_DCS PLCC w FiPay
4.02	User shall continue to have the ability to partial tender a transaction using both credit and financing, using same or different cards	• R10_BBY_xPOS_DCS PLCC w FiPay
4.03	User shall continue to have the ability to partial tender a transaction using multiple method of payments, and multiple cards	• R10_BBY_xPOS_DCS PLCC w FiPay
4.04	Employee purchases using PLCC and DCS Accord-D shall consider upcharge.	• 2.4.4 Tender Employee Transaction
4.04.1	Upon using DCS AccordD Regular credit for employee purchase, a 2% upcharge shall be incurred.	• Data configuration
4.04.2	Upon using DCS AccordD Financing or PLCC for employee purchase, the upcharge rate shall be based on finance plan setup.	• Data configuration

Req ID	Description	•	Section
4.05	Finance options and admin fee offered for PLCC in XPOS shall be the same as ePOS. Similarly, financing options and adfmin fee offered for DCS AccordD (Visa and Mastercard) shall be the same as ePOS	•	BBYC_mPOS_Finance Tender FDoc
5.01	The minimum and maximum limit shall be the same between ePOS and xPOS. The configuration of the lower and upper limit for each finance plan shall apply to both ePOS and xPOS [Note: Per ePOS, xPOS in scope of this project is expected to only enforce lower limit]	•	BBYC_mPOS_Finance Tender FDoc
5.02	Upon financing for PLCC and DCS Accord-D, the system shall display a list of eligible finance plans along with the corresponding eligible amount and admin fee for selection	•	BBYC_mPOS_Finance Tender FDoc
5.02.1	The eligible amount of the finance plans shall be calculated as the greater of: 1. Sum of items eligible for the finance plan, or 2. Minimum amount configured for the finance plan	•	BBYC_mPOS_Finance Tender FDoc
5.02.2	If the sum of items eligible for the finance plan is less than the minimum amount configured for the finance plan, xPOS shall not display the finance plan on the finance plan selection list	•	BBYC_mPOS_Finance Tender FDoc
5.03	Upon user selecting a finance plan and entering a finance amount that is less than the lower limit for the finance plan, xPOS shall display an error message stating the entered amount is less than the required minimum.	•	BBYC_mPOS_Finance Tender FDoc
FR6	When a DCS Accord-D card is used for financing or when a PLCC card is used, authorization shall be against DCS, otherwise, authorization shall be as Credit to Global Payments	•	Not a POS requirement
6.01	The system shall support real-time authorization of xPOS sales authorizations to Desjardins bank (for financing)	•	Not a POS requirement
6.01.1	The authorization of xPOS sales to Desjardins bank shall be via FiPayEPS	•	BBYC_mPOS_Finance Tender FDoc
6.01.2	FiPay EPS response codes shall remain the same (0=approve; 1=decline; 2=referral)	•	R10_BBY_xPOS_DCS PLCC w FiPay
6.02	The system shall support manual authorization of xPOS sales authorization to Desjardins bank (for financing)	•	Not a POS Requirement
6.02.1	Manual authorization shall be initiated by xPOS via FiPay EPS. FiPay EPS shall be responsible for handling Save and Send	•	FiPay initiates manual entry
6.02.2	The system shall manage authorization requests and responses upon timeout reversal, for only the last processed transaction by terminal ID	•	Not a POS Requirement
6.02.3	The system shall manage authorization requests and responses of call for referrals between BBYC and DCS	•	Not a POS Requirement
6.02.3.1	In the case of call for referral, **XPOS** shall prompt for the Approval Number and Call For Referral Amount	•	BBYC_mPOS_Finance Tender FDoc
6.02.3.2	Manager override shall be required for Call for Referral	•	BBYC_mPOS_Finance Tender FDoc
6.02.4	The system shall manage authorization requests and responses of tender void between BBYC and DCS	•	Not a POS Requirement
6.03	When offline to Desjardin, the xPOS shall apply floor limits and approve PLCC credit offline.	•	BBYC_mPOS_Finance Tender FDoc
6.03.1	In the case floor limit is configured to be 0, xPOS shall not approve the credit offline, instead it shall prompt for call for referral	•	BBYC_mPOS_Finance Tender FDoc
6.04	Tender code for xPOS and ePOS shall be the same: - The STAR tender code to be used shall continue to be "B" for DCS Accord D Financing (Visa/Mastercard) & "L"- DCS-PLCC. - The unique tender code identifying PLCC for POS shall continue to be CD 80, and for DCS Accord D financing shall continue to be CD 81	•	Data Setup
7.01	The printed receipt shall include Best Buy's name, as applicable, and the address of the applicable Best Buy Store	•	R10_BBY_xPOS_DCS PLCC w FiPay v1.2
7.02	The printed receipt shall include the Card number	•	R10_BBY_xPOS_DCS PLCC w FiPay v1.2
7.02.1	Card number of electronically printed receipt shall be masked except for the last 4 digits	•	R10_BBY_xPOS_DCS PLCC w FiPay v1.2

Req ID	Description	•	Section
7.03	The printed receipt shall include the payment method name. For PLCC the name shall be DCS PLCC. For DCS Accord-D Mastercard and Visa, the name shall be DCS Accord-D.	•	R10_BBY_xPOS_DCS PLCC w FiPay v1.2
7.04	The printed receipt shall include the authorization number	•	R10_BBY_xPOS_DCS PLCC w FiPay v1.2
7.05	The printed receipt shall accurately reflect the LPS entry method: D=swipe, C=chip insert, or T=manual card entry	•	R10_BBY_xPOS_DCS PLCC w FiPay v1.2
7.06	The printed receipt shall include the date and time of the transaction.	•	R10_BBY_xPOS_DCS PLCC w FiPay v1.2
7.06.1	The transaction date and time shall be from the TAS server	•	R10_BBY_xPOS_DCS PLCC w FiPay v1.2
7.07	The printed receipt shall include financing details for PLCC or DCS AccordD financing. This shall include the Plan, Term, Grace, and Description	•	R10_BBY_xPOS_DCS PLCC w FiPay v1.2
7.08	The printed receipt shall include the Terms and Conditions for PLCC or DCS AccordD financing	•	R10_BBY_xPOS_DCS PLCC w FiPay v1.2
7.09	The printed receipt shall include the entire amount due for the transaction (including any applicable Taxes);	•	R10_BBY_xPOS_DCS PLCC w FiPay v1.2
8.01	For returns of xPOS transactions using financing, ePOs shall continue to check if the finance plan is still valid (via TLUP) - If the plan is valid, ePOS shall not prompt for the Finance Plan. - If the plan is no longer valid or does not exist, ePOS shall prompt for the finance plan for user to select.	•	Return Tender spec when complete
8.02	For Regular Return with receipt and DCS Accord-D Credit (no Financing) was the original tender, ePOS shall continue to prompt to select Financing/Credit. The refund shall be treated like a regular credit card.	•	Return Tender spec when complete
8.03	For all returns of xPOS sales on ePOS, ePOS shall continue to send 999999 as the original approval number	•	Return Tender spec when complete
8.04	Returns of xPOS sales on ePOS shall continue to be authorized via FiPay and RTS	•	Return Tender spec when complete
9.01	Store Accounting Totals backoffice reporting shall reflect payment method for PLCC and DCS AccordD on XPOS	•	Data Setup
9.02	Detail Transaction Listing backoffice reporting shall reflect payment method for PLCC and DCS AccordD on XPOS	•	Data Setup
10.01	Upon selecting payment on account, XPOS shall prompt for amount of payment	•	Payment on Account not implemented
10.02	XPOS shall accept partial tender for payment on account	•	Payment on Account not implemented
10.03	XPOS shall allow only Debit, Cash ,or CDN Cheque as tender for payment on account	•	Payment on Account not implemented
10.04	XPOS shall send the account number in POS Log without authorizing through FiPay EPS	•	Payment on Account not implemented
10.05	The settlement file from CSPARC for in-store payment transactions collected through POS shall include XPOS Payment on Account transactions	•	Payment on Account not implemented
10.06	Payments on accounts shall include either a mod10 validation or an authorization when performed in the store.	•	Payment on Account not implemented
10.07	The printed receipt of PLCC and DCS Accord-D Card Sales transactions shall have the same labels, fields, and layout as ePOS receipt. This includes and is not limited to the following:	•	Payment on Account not implemented
10.07.1	Header including Store Name and Address	•	Payment on Account not implemented
10.07.2	Transaction Type: Payment on Account	•	Payment on Account not implemented
10.07.3	Masked PLCC Account Number	•	Payment on Account not implemented
10.07.4	Amount of payment	•	Payment on Account not implemented
10.07.5	Payment information including: a) Masked Card Number, b) Entry Method, c) Card Type, d) Terminal ID, e) Account selected, f) Sequence Number, g) Transaction status and ISO code, h) Transaction Date, i) payment amount	•	Payment on Account not implemented

Req ID	Description	•	Section
10.07.6	If partial tender, payment information for all tenders shall be displayed	•	Payment on Account not implemented
10.07.7	4 part key	•	Payment on Account not implemented

11.   APPENDIX B*: REFERENCED DOCUMENTATION*

- Tender Use Case - BBYC_mPOS_R8_Tender FDoc_v1.2

- Manager Override Use Case - BBYC_mPOS_R7_Manager Override FDoc_1.1

- Finance Tender Use Case - BBYC_mPOS_Finance Tender FDoc_1.2

- R10_BBY_xPOS_DCS PLCC w FiPay v1.2

12.   APPENDIX C*: GLOSSARY*

Term	Definition
BIN	BIN stands for Bank Identification Number and is the first 6 digits of the card (identifies the issuer). Also known as Issuer Identification Number. A typical BIN file contains a list of number ranges to identify valid cards and to distinguish Debit Cards from Credit Cards and other types of cards such as Pre-Paid Credit Cards and Private Label Credit Cards.
PLCC	Private Label Credit Card are cards branded for a specific retailer. Retailers are able to provide specials for if the card is used. Best Buy provides financing options when the card is used.
Signature Numpoints	
Transaction Key	Consists of – Store, Date, Register Number, Transaction Number
EMV	Europay, MasterCard and Visa, a global standard for inter-operation of integrated circuit cards (IC cards or "chip cards") and IC card capable point of sale (POS) terminals and automated teller machines (ATMs), for authenticating credit and debit card transactions.
DCS-Visa	Dejardins card that can be processed as a financed card or as a pure visa credit card.
DCS-PLCC	Dejardins PLCC card.

13. *APPENDIX* D*: PROCESS FLOWS*

Notes:

The flows below are designed to show a typical flow of the data and to illustrate the different activities that happen on each device. There are additional flows that can happen; this is not an exhaustive list of flows.

MPOS – denotes the activity that happens on the MPOS device, display and customer activity

MPM – denotes the activity that happens on the MPM device, display and customer activity

MRF, BRIDGE, AJB – activity that happens behind the scenes by the different systems

The text highlighted in red is non-system SOP activity – such as store associate hands MPM device to customer.

13.1   EMV

13.1.1 Approval Flow for EMV Credit Card with PIN – Non-Employee Transaction

1. MPOS and MPM: Store Associate pairs up the MPOS device with MPM device at the start of shift
2. MPOS: Store Associate rings up transaction
3. MPOS: Store Associate selects Total
4. MPOS: System displays Tender Screen on MPOS device
5. MPOS: Store Associate selects Credit/Debit tender (MPM tendering) – amount to authorize is the Balance Due amount
6. MPOS: System displays message to hand MPM device to customer
7. MRF: System sends Authorization request (request 100) to AJB with authorization amount
8. AJB: Sends request to MPM device (via BRIDGE) to swipe/insert card
9. MPM: Prompts to Swipe or Insert Card
10. Store Associate hands MPM device to Customer
11. MPM: Customer inserts card
12. BRIDGE: Detects card and responds to AJB
13. AJB: Sends processing message to MPM device (via BRIDGE)
14. MPM: Displays 'processing' message
15. AJB: Sends response to MRF with the captured card details (card details 121)
16. MRF: System determines that no card specific logic needs to be applied and replies back to AJB (authorize 121)
17. AJB: Sends request to MPM device (via BRIDGE) to enter PIN
18. MPM: Prompts to enter PIN
19. MPM: Customer enters PIN
20. BRIDGE: Sends entered value to AJB
21. AJB: Accepts PIN and sends approval request to the bank
22. AJB: Receives approval for the Card and Amount
23. AJB: Sends APPROVED and REMOVE CARD request to MPM Device (via BRIDGE)
24. MPM: Prompts the amount is approved and request the user to remove card
25. MPM: Customer removes card
26. Customer hands MPM device to Store Associate
27. AJB: Sends APPROVED response to MRF
28. MRF: Receives Approval response and sends response to the MPOS client
29. MPOS: System adds the tender to the transaction
30. MPOS: System determines Balance Due is $0.00 and completes the transaction and prints the receipt

13.1.2 Approval Flow for EMV Credit Card with PIN – Employee Transaction

1. MPOS and MPM: Store Associate pairs up the MPOS device with MPM device at the start of shift
2. MPOS: Store Associate rings up transaction
3. MPOS: Store Associate selects Total
4. MPOS: System displays Tender Screen on MPOS device
5. MPOS: Store Associate selects Credit/Debit tender (MPM tendering) – amount to authorize is the Balance Due amount
6. MPOS: System displays message to hand MPM device to customer
7. MRF: System sends Authorization request (request 100) to AJB with authorization amount
8. AJB: Sends request to MPM device (via BRIDGE) to swipe/insert card
9. MPM: Prompts to Swipe or Insert Card
10. Store Associate hands MPM device to Customer
11. MPM: Customer inserts card
12. BRIDGE: Detects card and responds to AJB
13. AJB: Sends processing message to MPM device (via BRIDGE)
14. MPM: Displays 'processing' message
15. AJB: Sends response to MRF with the captured card details (card details 121)
    a. MRF: System determines that the card requires that an employee upcharge needs to be added to the transaction and to the authorization amount
    b. MRF: Calculates the employee upcharge
    c. MPOS: Prompts for acceptance of the employee upcharge amount
    d. MPOS: Store Associate/Customer accepts the amount
    e. MPOS: Adds the employee upcharge sku and applicable taxes to the transaction
    f. MRF: Updates the authorization amount with the employee upcharge sku and its applicable taxes
16. MRF: Replies back to AJB with the new amount to authorize (authorize 121)
17. AJB: Sends request to MPM device (via BRIDGE) to enter PIN
18. MPM: Prompts to enter PIN
19. MPM: Customer enters PIN
20. BRIDGE: Sends entered value to AJB
21. AJB: Accepts PIN and sends approval request to the bank
22. AJB: Receives approval for the Card and Amount
23. AJB: Sends APPROVED and REMOVE CARD request to MPM Device (via BRIDGE)
24. MPM: Prompts the amount is approved and request the user to remove card
25. MPM: Customer removes card
26. Customer hands MPM device to Store Associate
27. AJB: Sends APPROVED response to MRF
28. MRF: Receives Approval response and sends response to the MPOS client
29. MPOS: System adds the tender to the transaction
30. MPOS: System determines Balance Due is $0.00 and completes the transaction and prints the receipt

13.1.3 Approval Flow for EMV Credit Card with PIN – Card Swiped First – Non-Employee Transaction

1. MPOS and MPM: Store Associate pairs up the MPOS device with MPM device at the start of shift
2. MPOS: Store Associate rings up transaction
3. MPOS: Store Associate selects Total
4. MPOS: System displays Tender Screen on MPOS device
5. MPOS: Store Associate selects Credit/Debit tender (MPM tendering) – amount to authorize is the Balance Due amount
6. MPOS: System displays message to hand MPM device to customer
7. MRF: System sends Authorization request (request 100) to AJB with authorization amount
8. AJB: Sends request to MPM device (via BRIDGE) to swipe/insert card
9. MPM: Prompts to Swipe or Insert Card
10. Store Associate hands MPM device to Customer
11. MPM: Customer swipes card
12. BRIDGE: Detects card and responds to AJB
13. AJB: Sends response to MPM device (via BRIDGE) to insert card
14. MPM: Prompts to insert card
15. MPM: Customer inserts card
16. BRIDGE: Detects card and responds to AJB
17. AJB: Sends processing message to MPM device (via BRIDGE)
18. MPM: Displays 'processing' message
19. AJB: Sends response to MRF with the captured card details (card details 121)
20. MRF: System determines that no card specific logic needs to be applied and replies back to AJB (authorize 121)
21. AJB: Sends request to MPM device (via BRIDGE) to enter PIN
22. MPM: Prompts to enter PIN
23. MPM: Customer enters PIN
24. BRIDGE: Sends entered value to AJB
25. AJB: Accepts PIN and sends approval request to the bank
26. AJB: Receives approval for the Card and Amount
27. AJB: Sends APPROVED and REMOVE CARD request to MPM Device (via BRIDGE)
28. MPM: Prompts the amount is approved and request the user to remove card
29. MPM: Customer removes card
30. Customer hands MPM device to Store Associate
31. AJB: Sends APPROVED response to MRF
32. MRF: Receives Approval response and sends response to the MPOS client
33. MPOS: System adds the tender to the transaction
34. MPOS: System determines Balance Due is $0.00 and completes the transaction and prints the receipt

13.1.4 Declined Flow for EMV Credit Card with PIN – Non-Employee Transaction

1. MPOS and MPM: Store Associate pairs up the MPOS device with MPM device at the start of shift
2. MPOS: Store Associate rings up transaction
3. MPOS: Store Associate selects Total
4. MPOS: System displays Tender Screen on MPOS device
5. MPOS: Store Associate selects Credit/Debit tender (MPM tendering) – amount to authorize is the Balance Due amount
6. MPOS: System displays message to hand MPM device to customer
7. MRF: System sends Authorization request (request 100) to AJB with authorization amount
8. AJB: Sends request to MPM device (via BRIDGE) to swipe/insert card
9. MPM: Prompts to Swipe or Insert Card
10. Store Associate hands MPM device to Customer
11. MPM: Customer inserts card
12. BRIDGE: Detects card and responds to AJB
13. AJB: Sends processing message to MPM device (via BRIDGE)
14. MPM: Displays 'processing' message
15. AJB: Sends response to MRF with the captured card details (card details 121)
16. MRF: System determines that no card specific logic needs to be applied and replies back to AJB (authorize 121)
17. AJB: Sends request to MPM device (via BRIDGE) to enter PIN
18. MPM: Prompts to enter PIN
19. MPM: Customer enters PIN
20. BRIDGE: Sends entered value to AJB
21. AJB: Accepts PIN and sends approval request to bank
22. AJB: Receives declined for the Card and Amount
23. AJB: Sends DECLINED and REMOVE CARD request to MPM Device (via BRIDGE)
24. MPM: Prompts the card is declined and request the user to remove card
25. MPM: Customer removes card
26. Customer hands MPM device to Store Associate
27. AJB: Sends DECLINED response to MRF
28. MRF: Receives Decline response and sends response to the MPOS client
29. MPOS: Returns to Tender screen without adding the tender

13.1.5 Approval Flow for EMV Credit Card with PIN and Signature – Non-Employee Transaction

1. MPOS and MPM: Store Associate pairs up the MPOS device with MPM device at the start of shift
2. MPOS: Store Associate rings up transaction
3. MPOS: Store Associate selects Total
4. MPOS: System displays Tender Screen on MPOS device
5. MPOS: Store Associate selects Credit/Debit tender (MPM tendering) – amount to authorize is the Balance Due amount
6. MPOS: System displays message to hand MPM device to customer
7. MRF: System sends Authorization request (request 100) to AJB with authorization amount
8. AJB: Sends request to MPM device (via BRIDGE) to swipe/insert card
9. MPM: Prompts to Swipe or Insert Card
10. Store Associate hands MPM device to Customer
11. MPM: Customer inserts card
12. BRIDGE: Detects card and responds to AJB
13. AJB: Sends processing message to MPM device (via BRIDGE)
14. MPM: Displays 'processing' message
15. AJB: Sends response to MRF with the captured card details (card details 121)
16. MRF: System determines that no card specific logic needs to be applied and replies back to AJB (authorize 121)
17. AJB: Sends request to MPM device (via BRIDGE) to enter PIN
18. MPM: Prompts to enter PIN
19. MPM: Customer enters PIN
20. BRIDGE: Sends entered value to AJB
21. AJB: Accepts data entry and sends approval request to the bank
22. AJB: Receives approval for the Card and Amount
23. AJB: Sends APPROVED and REMOVE CARD request to MPM Device (via BRIDGE)
24. MPM: Prompts the amount is approved and request the user to remove card
25. MPM: Customer removes card
26. Customer hands MPM device to Store Associate
27. AJB: Sends APPROVED with Signature Required response to MRF
28. MRF: Receives Approval with Signature Required response and sends response to the MPOS client
29. MPOS: Prompts to capture signature
30. MPOS: Customer Signs device
31. MPOS: Signature is accepted
32. MPOS: System adds the tender to the transaction
33. MPOS: System determines Balance Due is $0.00 and completes the transaction and prints the receipt

13.2 Non-EMV

13.2.1 Approval Flow for Non-EMV Credit Card without CID/CVV required – Non-Employee Transaction

1. MPOS and MPM: Store Associate pairs up the MPOS device with MPM device at the start of shift
2. MPOS: Store Associate rings up transaction
3. MPOS: Store Associate selects Total
4. MPOS: System displays Tender Screen on MPOS device
5. MPOS: Store Associate selects Credit/Debit tender (MPM tendering) – amount to authorize is the Balance Due amount
6. MPOS: System displays message to hand MPM device to customer
7. MRF: System sends Authorization request (request 100) to AJB with authorization amount
8. AJB: Sends request to MPM device (via BRIDGE) to swipe/insert card
9. MPM: Prompts to Swipe or Insert Card
10. Store Associate hands MPM device to Customer
11. MPM: Customer swipes card
12. BRIDGE: Detects card and responds to AJB
13. AJB: Sends processing message to MPM device (via BRIDGE)
14. MPM: Displays 'processing' message
15. AJB: Sends response to MRF with the captured card details (card details 121)
    a. MRF: System determines that the card/entry method does not requires CID/CVV/CVV2 to prompt
16. MRF: Replies back to AJB with the amount to authorize (authorize 121)
17. AJB: Accepts request and sends approval request to the bank
18. AJB: Receives approval for the Card and Amount
19. AJB: Sends APPROVED to MPM Device (via BRIDGE)
20. MPM: Prompts the amount is approved and request the user to remove card
21. Customer hands MPM device to Store Associate
22. AJB: Sends APPROVED response to MRF
23. MRF: Receives Approval response and sends response to the MPOS client with the requirement that Signature is required for the card
24. MPOS: Prompts to capture signature
25. MPOS: Customer Signs device
26. MPOS: Signature is accepted
27. MPOS: System adds the tender to the transaction
28. MPOS: System determines Balance Due is $0.00 and completes the transaction and prints the receipt

13.2.2 Approval Flow for Non-EMV Credit Card with CID/CVV required – Employee Transaction

1. MPOS and MPM: Store Associate pairs up the MPOS device with MPM device at the start of shift
2. MPOS: Store Associate rings up transaction
3. MPOS: Store Associate selects Total
4. MPOS: System displays Tender Screen on MPOS device
5. MPOS: Store Associate selects Credit/Debit tender (MPM tendering) – amount to authorize is the Balance Due amount
6. MPOS: System displays message to hand MPM device to customer
7. MRF: System sends Authorization request (request 100) to AJB with authorization amount
8. AJB: Sends request to MPM device (via BRIDGE) to swipe/insert card
9. MPM: Prompts to Swipe or Insert Card
10. Store Associate hands MPM device to Customer
11. MPM: Customer swipes card
12. BRIDGE: Detects card and responds to AJB
13. AJB: Sends processing message to MPM device (via BRIDGE)
14. MPM: Displays 'processing' message
15. AJB: Sends response to MRF with the captured card details (card details 121)
    a. MRF: System determines that the card requires CID/CVV/CVV2 to prompt
    b. MPOS: Prompts for CID/CVV/CVV2
    c. MPOS: Store Associate enters in the value
    d. MRF: System determines that the card requires that an employee upcharge needs to be added to the transaction and to the authorization amount
    e. MRF: Calculates the employee upcharge
    f. MPOS: Prompts for acceptance of the employee upcharge amount
    g. MPOS: Store Associate/Customer accepts the amount
    h. MPOS: Adds the employee upcharge sku and applicable taxes to the transaction
    i. MRF: Updates the authorization amount with the employee upcharge sku and its applicable taxes
16. MRF: Replies back to AJB with the new amount to authorize and the entered CID/CVV/CVV2 value (authorize 121)
17. AJB: Accepts request and sends approval request to the bank
18. AJB: Receives approval for the Card and Amount
19. AJB: Sends APPROVED to MPM Device (via BRIDGE)
20. MPM: Prompts the amount is approved and request the user to remove card
21. Customer hands MPM device to Store Associate
22. AJB: Sends APPROVED response to MRF
23. MRF: Receives Approval response and sends response to the MPOS client with the requirement that Signature is required for the card
24. MPOS: Prompts to capture signature
25. MPOS: Customer Signs device
26. MPOS: Signature is accepted
27. MPOS: System adds the tender to the transaction
28. MPOS: System determines Balance Due is $0.00 and completes the transaction and prints the receipt

13.2.3 Approval Flow for non-EMV Private Label Credit Card – Finance Plan Selection

1. MPOS and MPM: Store Associate pairs up the MPOS device with MPM device at the start of shift
2. MPOS: Store Associate rings up transaction
3. MPOS: Store Associate selects Total
4. MPOS: System displays Tender Screen on MPOS device
5. MPOS: Store Associate selects Credit/Debit tender (MPM tendering) – amount to authorize is the Balance Due amount
6. MPOS: System displays message to hand MPM device to customer
7. MRF: System sends Authorization request (request 100) to AJB with authorization amount
8. AJB: Sends request to MPM device (via BRIDGE) to swipe/insert card
9. MPM: Prompts to Swipe or Insert Card
10. Store Associate hands MPM device to Customer
11. MPM: Customer swipes card
12. BRIDGE: Detects card and responds to AJB
13. AJB: Sends processing message to MPM device (via BRIDGE)
14. MPM: Displays 'processing' message
15. AJB: Sends response to MRF with the captured card details (card details 121)
    a. MRF: System determines that the card is a finance card
    b. MRF: System determines what are the available finance plans for the transaction
    c. MPOS: Prompts the available finance plans
    d. MPOS: Store Associate selects a Finance Plan
    e. MRF: Determines that the selected Finance Plan requires Admin Fee
    f. MPOS: Prompts for acceptance of Admin Fee
    g. MPOS: Store Associate/Customer accepts Admin Fee
    h. MPOS: Prompts for the Amount to Authorize
    i. MPOS: Store Associate/Customer enters in Amount to Authorize
    j. MPOS: Adds the Admin Fee to the transaction
    k. MRF: Updates the authorization amount with the entered amount to authorize
16. MRF: Replies back to AJB with the new amount to authorize (authorize 121)
17. AJB: Accepts details and sends approval request to the bank
18. AJB: Receives approval for the Card and Amount
19. AJB: Sends APPROVED request to MPM Device (via BRIDGE)
20. MPM: Prompts the amount is approved
21. Customer hands MPM device to Store Associate
22. AJB: Sends APPROVED response to MRF
23. MRF: Receives Approval response and sends response to the MPOS client with the requirement that Signature is required for the card
24. MPOS: Prompts to capture signature
25. MPOS: Customer Signs device
26. MPOS: Signature is accepted
27. MPOS: System adds the tender to the transaction
28. MPOS: System determines Balance Due is $0.00 and completes the transaction and prints the receipt

13.2.4 Declined Flow for Non-EMV Credit Card without CID/CVV required – Non-Employee Transaction

1. MPOS and MPM: Store Associate pairs up the MPOS device with MPM device at the start of shift
2. MPOS: Store Associate rings up transaction
3. MPOS: Store Associate selects Total
4. MPOS: System displays Tender Screen on MPOS device
5. MPOS: Store Associate selects Credit/Debit tender (MPM tendering) – amount to authorize is the Balance Due amount
6. MPOS: System displays message to hand MPM device to customer
7. MRF: System sends Authorization request (request 100) to AJB with authorization amount
8. AJB: Sends request to MPM device (via BRIDGE) to swipe/insert card
9. MPM: Prompts to Swipe or Insert Card
10. Store Associate hands MPM device to Customer
11. MPM: Customer swipes card
12. BRIDGE: Detects card and responds to AJB
13. AJB: Sends processing message to MPM device (via BRIDGE)
14. MPM: Displays 'processing' message
15. AJB: Sends response to MRF with the captured card details (card details 121)
    a.   MRF: System determines that the card/entry method does not require CID/CVV/CVV2 to prompt
16. MRF: Replies back to AJB with the amount to authorize (authorize 121)
17. AJB: Accepts request and sends approval request to the bank
18. AJB: Receives card declined
19. AJB: Sends DECLINED to MPM Device (via BRIDGE)
20. MPM: Prompts the card is declined and request the user to remove card
21. Customer hands MPM device to Store Associate
22. AJB: Sends Declined response to MRF
23. MRF: Receives Decline response and sends response to the MPOS client
24. MPOS: Returns to Tender screen without adding the tender

13.2.5 Call for Referral Flow for Non-EMV Credit Card with CID/CVV required – Non-Employee Transaction

1. MPOS and MPM: Store Associate pairs up the MPOS device with MPM device at the start of shift
2. MPOS: Store Associate rings up transaction
3. MPOS: Store Associate selects Total
4. MPOS: System displays Tender Screen on MPOS device
5. MPOS: Store Associate selects Credit/Debit tender (MPM tendering) – amount to authorize is the Balance Due amount
6. MPOS: System displays message to hand MPM device to customer
7. MRF: System sends Authorization request (request 100) to AJB with authorization amount
8. AJB: Sends request to MPM device (via BRIDGE) to swipe/insert card
9. MPM: Prompts to Swipe or Insert Card
10. Store Associate hands MPM device to Customer
11. MPM: Customer swipes card
12. BRIDGE: Detects card and responds to AJB
13. AJB: Sends processing message to MPM device (via BRIDGE)
14. MPM: Displays 'processing' message
15. AJB: Sends response to MRF with the captured card details (card details 121)
    a.   MRF: System determines that the card requires CID/CVV/CVV2 to prompt
    b.   MPOS: Prompts for CID/CVV/CVV2
    c.   MPOS: Store Associate enters in the value
16. MRF: Replies back to AJB with the entered CID/CVV/CVV2 value (authorize 121)
17. AJB: Accepts request and sends approval request to the bank
18. AJB: Receives call for referral for the card
19. AJB: Sends Call for Referral to MPM Device (via BRIDGE)
20. MPM: Prompts the TBD
21. Customer hands MPM device to Store Associate
22. AJB: Sends Call for Referral response to MRF
23. MRF: Receives Call for Referral response and sends response to the MPOS client for call for referral with the requirement that signature is required for the card
24. MPOS: Prompts for Call for Referral details
25. MPOS: Store Associate captures call for referral details
26. MPOS: Prompts for Manager Override
27. MPOS: Manager enters credentials
28. MPOS: Prompts to capture signature
29. MPOS: Customer Signs device
30. MPOS: Signature is accepted
31. MPOS: System adds the tender to the transaction
32. MPOS: System determines Balance Due is $0.00 and completes the transaction and prints the receipt
33. MPOS: Returns to Tender screen without adding the tender