NISTIR 7644

Quick Capture Platform Use Cases

User Interaction Specifications

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National Institute of Standards and Technology • U.S. Department of Commerce

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EXECUTIVE SUMMARY

The Federal Bureau of Investigation's (FBI) Hostage Rescue Team (HRT) and other Department of Defense operations require mobile biometric collection (Mobile ID) devices. These devices are used worldwide, often in hostile environments to identify terrorists and other potential threats to our national security. The HRT members often operate under very dangerous circumstances, any time day or night, and under any weather conditions. These operational settings require a device that is easy to transport and is usable (effective and efficient) under a wide range of conditions. Today's solutions are non-optimal. They have been retrofitted from existing COTS products, resulting in equipment that is very heavy and unwieldy to be carried in and out of operations in a backpack. In addition, there is no standardization to the user interface. Thus in a high stress and time critical operation, the user of the device cannot depend on consistency or ease of use of the user interface. Not only is the device physically heavy and unwieldy but this lack of standardization and consistency demands a high cognitive load when using the device which can compromise the user's safety.

The FBI has recognized the need for a smaller footprint device, referred to as Quick Capture Platform (QCP), and one that provides consistency and a streamlined workflow for the users in the field. However, the FBI has been unable to identify any commercial vendor willing to develop a set of requirements that will adequately address the human factors and usability needs of their organization. Simply reusing the existing application in a different form factor was not an acceptable solution.

NIST's Visualization and Usability Group has partnered with the FBI HRT to provide a set of requirements enabling the FBI to build a portable biometric collection device capable of transmitting biometrics to a central database and receiving identity information with a consistent and usable user interface.

The goal of the project was to define a set of user requirements with a high fidelity user interface demonstration for a small platform, e.g. screen the size of an index card, that minimizes the cognitive load by:

- Defining an entirely new interaction paradigm
- Increasing the consistency among interaction patterns
- Streamlining and flattening the workflow and
- Reducing the visual noise;

To achieve this goal, the NIST team employed a rigorous user-centered design (UCD) process. The process included the following activities:

- *User requirements and Task analysis* - operational data was collected over an eight hour time period by observing user tasks in realistic setting, interviews, demonstrations and brain storming sessions. User and task analysis is the process of learning about users by observing them in action. It is different from asking them questions in focus groups outside the user's typical environments and away from their work. Often times, users cannot articulate what they do, especially if they are very familiar with the tasks they perform. Only by observing users and probing for more understanding in the context of their work can you obtain the information that will encourage new design constructs. The current operational process flow was documented based on the results of task analysis. User requirements were analyzed and organized into functional areas.
- *Workflow improvement* – a new workflow was developed based on user needs and observed efficiencies.
- *Use cases development* - a set of use cases was developed that describe (step by step) the new system functionality from a user's point of view. There are 29 individual use cases for this application. The use case document defines the functional requirements and user interaction specifications for the new system.
- *Wireframes development* - Wireframes are screen designs depicting functions and workflow as specified in the use cases. Wireframes do not include the look and feel, e.g. color, fonts, or graphics, of the user interface.
- *High fidelity user interface development* - demonstration to offer a more exact example of the user interface and determine the viability of the design on the small interface.

This document only describes the functional requirements and user interaction specifications, in the format of use cases, of all the functional requirements gathered, for the Mobile ID quick capture platform (QCP).

1. INTRODUCTION

1.1 — OVERVIEW

The document defines functional requirements for the Quick Capture Platform (QCP). These requirements have been developed for a portable hardware device with small screen size, such as 5”(W)x3”(H).

Functional requirements are the definitions of specific features or services in which the system must provide a response. Section 3 of this document contains complete definitions, in the format of use cases, of all the functional requirements gathered.

1.2 — SCOPE

1.2.1 — Functional Scope

This document describes only the functionality and the human interaction of a user interface (UI) for the QCP application. Functions and features that are in support of the UI and how the QCP application processes the data depicted by the UI will be assumed, but not described in the document.

1.2.2 — Organizational Scope

This section addresses the organizations that QCP must interact with in order to successfully identify, gather, and confirm functional and non-functional requirements.

- FBI HRT provides the strategic direction and requirements.
- NIST Biometrics Usability team provides use cases and wireframes for designing a usable user interface according to usability industry standards.

2. GENERAL DESCRIPTION

2.1 — QCP OVERVIEW

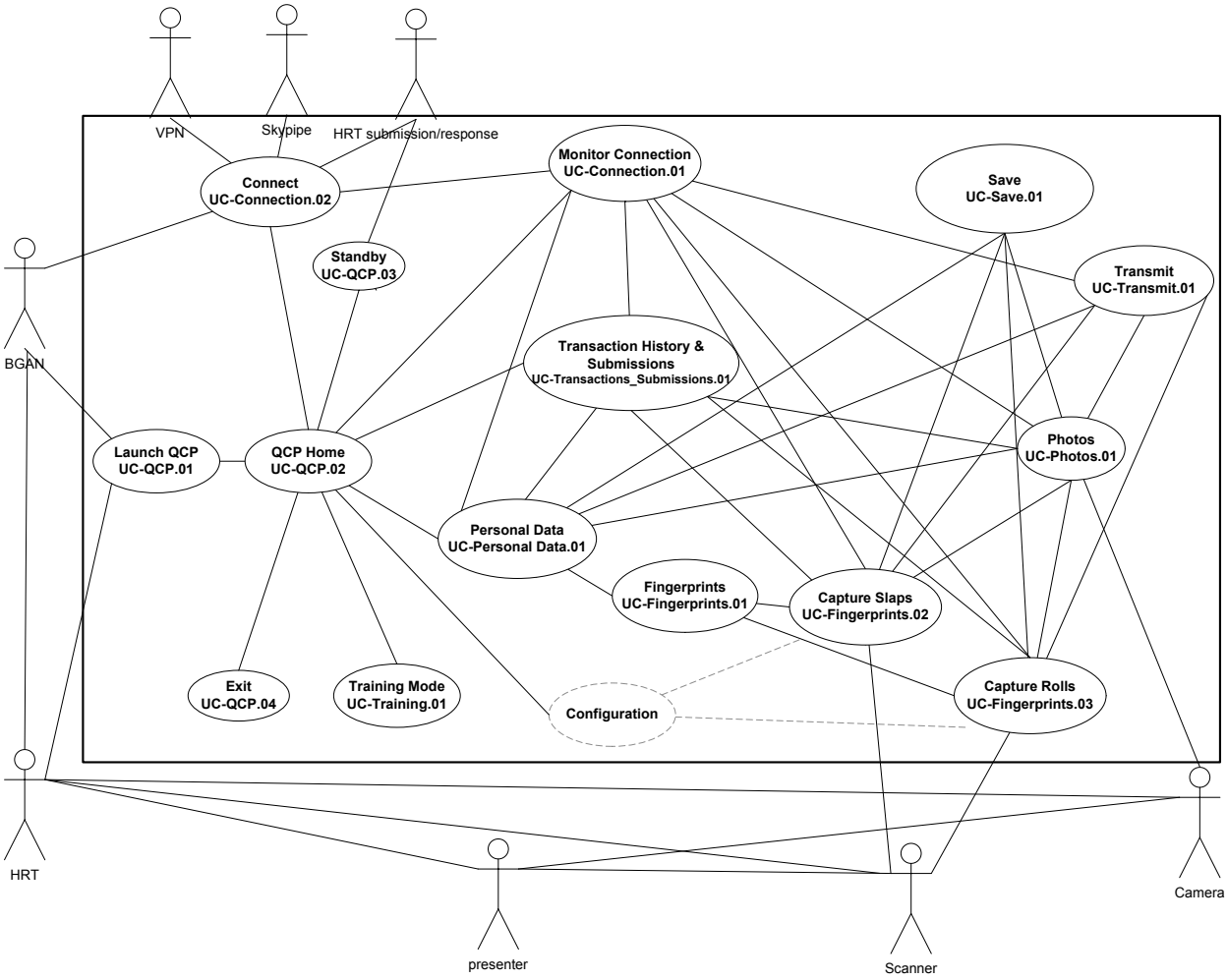

Figure 1 Top Level Use Cases

2.2 — SYSTEM COMPONENTS

The key functional components that will comprise QCP include:

- QCP Application
- Network connection/monitoring

- Create Slaps Transaction
    - Personal Data
    - Fingerprints
    - Photos
- Create Query Transaction
    - Personal Data
    - Fingerprints
    - Photos
- Create Rolls Transaction
    - Personal Data
    - Fingerprints
    - Photos
- Transaction History and Submissions
- Training
- QCP Standby

2.3 — ACTOR DEFINITION

An actor (characterized as a stick figure drawing) is a user/component that plays a role with respect to the system. It is someone or something outside the application that interacts with QCP. The actors defined in this section will be referenced throughout this document, specifically in Section 3 where use cases are modeled/documented as a part of the application's functional requirements. The defined actors and their definitions are specified below.

- HRT member
- Communication device, i.e. BGAN
- VPN client software
- Acceleration software, i.e. Skypipe software
- Submission software, i.e. HRT submission/response software
- Fingerprint scanner
- Biometric presenter (Subject)
- Embedded digital camera

2.3.1 — HRT Member

Performs the following tasks:

- User of the QCP application
- Interaction with other actors:
    - BGAN
    - VPN client software

- Skypipe software
- HRT Submission/Response software
- Fingerprint scanner
- Biometric presenter (Subject)
- Embedded digital camera

2.3.2 — BGAN

Performs the following tasks:
- Transmits and receives data via uplink

2.3.3 — VPN Client software

Performs the following tasks:
- Requests Username and Password for authentication
- Passes information between Skypipe software and BGAN

2.3.4 — Skypipe software

Performs the following tasks:
- Communicates between VPN client software and HRT submission/response software

2.3.5 — HRT submission/response software

Performs the following tasks:
- Polls for incoming responses
- Submits data to Skypipe software for subsequent uplinks

2.3.6 — Fingerprint Scanner

Performs the following tasks:
- Acquires fingerprints images from presenter for QCP application

2.3.7 — Biometric Presenter (Subject)

Performs the following tasks:
- Provides biometrics, e.g. fingerprints, face, and iris

2.3.8 — Embedded Digital Camera

Performs the following tasks:

- Acquires photographs of presenter for QCP application

2.4 — GENERAL CONSTRAINTS

Constraints:

- QCP application's control of any digital cameras is only for cameras physically integral to the QCP hardware platform

2.5 — ASSUMPTIONS AND DEPENDENCIES

The following section presents the assumptions and dependencies for the QCP application. Assumptions include items that if changed would affect the specific use cases in Section 3 or items that if changed might impede or divert the direction of development. Dependencies define resources or activities that the project relies upon for successful completion. The QCP assumptions and dependencies include:

Assumptions:

- If communication devices other than BGAN are used, such as cell phones or WiFi, the use cases will need to be modified to reflect the statuses of the devices and the protocols used.
- If biometric devices other than fingerprint scanner or digital camera are used, such as an iris scanner, the use cases will need to be modified to reflect the statuses of those biometric devices.
- There will be a cancel option for:
    - Fingerprint capture process
    - Annotation
    - Exit QCP application with unsaved data
    - Leaving a transaction with unsaved data
- There will be a method to configure:
    - Fingerprint capture sequence
    - Default VPN user name and password
    - Default location on the computer to save RAP sheets automatically
- Help option shall always be accessible.
- The features such as *Open*, *Save*, and *Print*, etc. will be available in some areas in the QCP application, refer to *Appendix D* for a listing of the features and their availability in different functional areas.

Dependencies:

- BGAN is working properly with QCP application, i.e. when BGAN is active, the following information will be communicated from BGAN to QCP application:

    - Signal Strength, e.g. decibel reading
    - Connectivity sensing, e.g. cable and network
    - BGAN statuses
- VPN Client software, Skypipe software, HRT Submission/Response software are integrated with QCP application for:
    - Data transfer
    - Statuses
- QCP application shall be configurable for successful communications with a fingerprint scanner and an embedded digital camera.

3. QCP USE CASES

3.1 — KEY COMPONENTS AND USE CASE INDEX

The following section outlines the requirements expressed by stakeholders/subject matter experts (SMEs) associated with QCP. These requirements are stated in the format of use cases. The use cases revolve around the major key component areas documented in Section 2.2. Table 1 provides a listing of use cases so that they can be easily found.

Table 1 Index of Fully Specified Use cases

Version	Use Case ID	Use Case Name	Page #
1.0	UC – QCP.01	Launch QCP	11
1.0	UC – QCP.02	QCP Home	11
1.0	UC – QCP.03	QCP Standby	13
1.0	UC – QCP.04	Exit QCP	14
1.0	UC – Connection.01	Monitor Connection	16
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1.0	UC – Personal Data.01	Personal Data	21
1.0	UC – Fingerprints.01	Fingerprints	26
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1.0	UC – Photos.01	Photos	45
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1.0	UC – Transaction.03	Update Transaction	62

1.0	UC – Transaction.04	View RAP Sheet	63
1.0	UC – Transmit.01	Transmit	66
1.0	UC – Save.01	Save Transaction	69
1.0	UC – Training.01	Training Mode	71

3.2 — SPECIFIC FUNCTIONAL USE CASES

3.2.1 — Use Case – Launch QCP

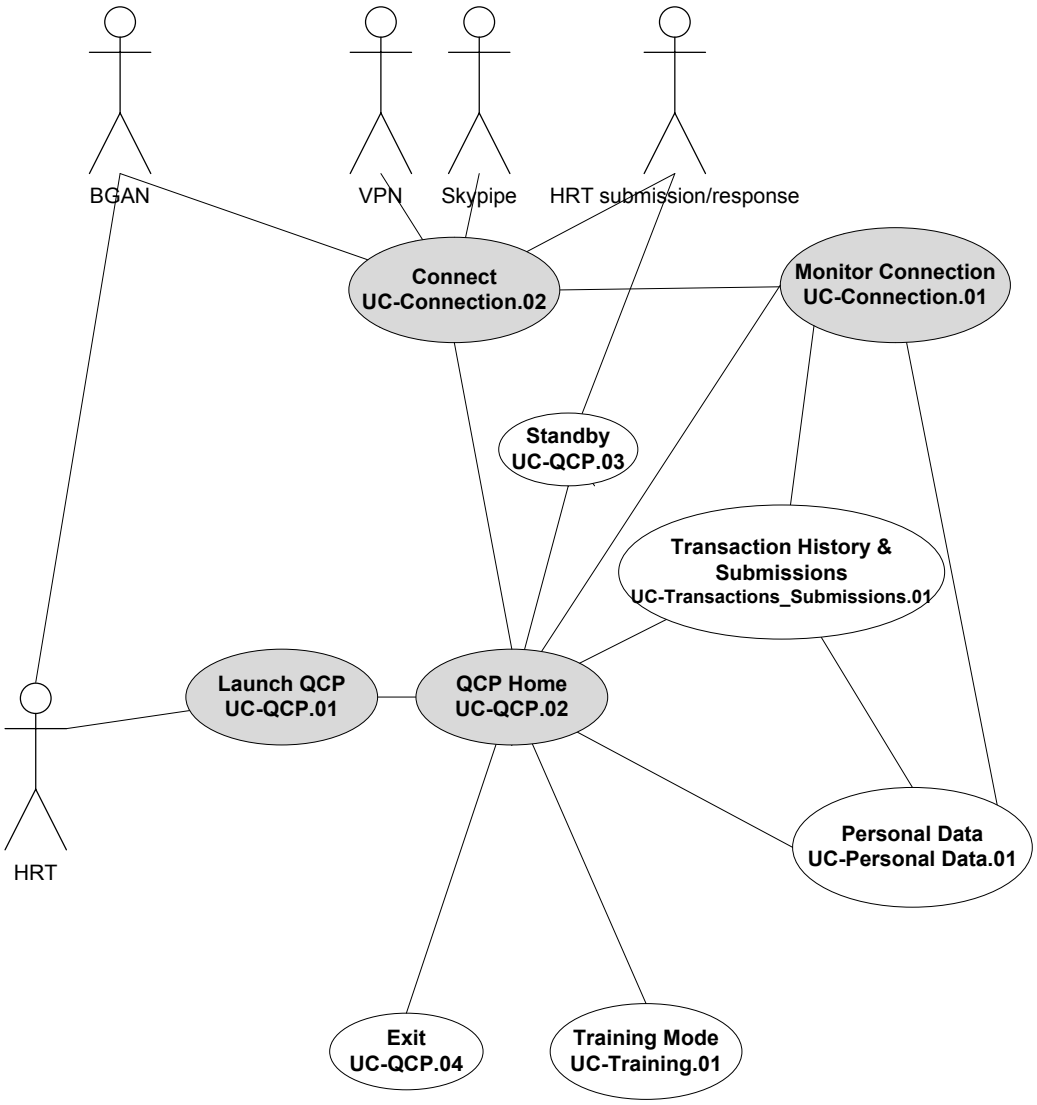

Figure 2 Launch QCP

3.2.1.1 UC – QCP.01 - Launch

UC- QCP.01	Launch QCP
Actors	HRT member
Precondition	None
Postcondition	QCP application successfully launched
Includes	
Extends From	
Super Use Case	
Trigger	User decides to start QCP application.
Description	
The user decides to launch QCP application. The application presents connection status and options to access various functional areas.	
Process Description	
Primary Process Scenario	**Launch QCP Application**
Step 1	User decides to launch QCP application.
Step 2	QCP application presents to the user: • QCP Home (UC – QCP.02)

Exceptions, Error Situations:	• Error: QCP fails to start
	  ○ QCP logs error(s)
	  ○ QCP displays an error message indicating the failure of launching QCP application
	• Error: Scanner not available
	  ○ QCP displays an error message indicating the scanner unavailability

Open Issues/Notes	

3.2.1.2 UC – QCP.02 - QCP Home

UC- QCP.02	QCP Home
Actors	HRT member
Precondition	None
Postcondition	QCP home successfully displayed
Includes	
Extends From	

Super Use Case	QCP.01
Trigger	• User decides to start QCP application. –OR– • User decides to access the QCP Home feature (from use cases where QCP Home is available)
Description	
The application presents QCP home with connection status and options to access various functional areas.	
Process Description	
Primary Process Scenario	**QCP Home**
Step 1	QCP application presents to the user: • Connection status (Primary Scenario in *UC – Connection.01)* • Options to o Connect (available conditionally, see Exception) o Create New Slaps Transaction o Create New Rolls Transaction o Create Query Transaction o Access Transaction History and Submissions o Enable or Disable Training Mode o Place QCP Application in or out of Standby mode o Exit QCP Application
Step 2	• *UC – Connection.02* if user selects Connect option • *UC- Personal Data.01* if user selects Create New Slaps Transaction, Create New Rolls Transaction, or Create Query Transaction option • *UC – Transactions_Submissions.01* if user selects access Transaction History and Submissions option • *UC – Training.01* if user selects Training Mode option • *UC – QCP.03* if user selects Standby option • *UC – QCP.04* if user selects Exit QCP Application option
Exceptions, Error Situations:	• Exception: "Connect" feature will not be available, if: o Connection status is active – OR– o Communication hardware is not present • Exception: if QCP is in Standby mode, user selects any of the following options will take QCP out of the Standby mode (alternate scenario in *UC – QCP.03)*:

	○ Connect ○ New Slaps Transaction ○ New Rolls Transaction ○ Query Transaction ○ Transaction History and Submissions
Open Issues/Notes	

3.2.1.3 UC – QCP.03 - Standby

UC- QCP.03	**QCP Standby**
Actors	HRT member
Precondition	QCP application successfully launched.
Postcondition	QCP application successfully placed in or out of standby mode.
Includes	
Extends From	
Super Use Case	UC – QCP.01
Trigger	User decides to change QCP application's standby mode.
Description	
The user decides to change the standby mode of the QCP application.	
Process Description	
Primary Process Scenario	**Place QCP Application in Standby mode**
Step 1	QCP application: • Pauses the process of HRT Submission/Response software • Disables the option of changing the Training mode
Step 2	QCP application presents to the user: • Indication of standby status
Exceptions, Error Situations:	• Exception – if the standby request occurs during a submission or response communication, the HRT Submission/Response software should not be paused until the completion of the communication.
Alternate Process Scenario 1	**Take QCP Application out of Standby mode**

Step 1	QCP application: • Resumes the process of HRT Submission/Response software • Enables the option of changing the Training mode
Step 2	QCP application presents to the user: • Indication of standby status
Step 3	QCP Home *(UC – QCP.01).*
Open Issues/Notes	

3.2.1.4 UC – QCP.04 - Exit

UC- QCP.05	**Exit QCP**
Actors	HRT member
Precondition	QCP application successfully launched.
Postcondition	QCP application successfully ended.
Includes	
Extends From	
Super Use Case	UC – QCP.01
Trigger	User decides to end QCP application: • Select "Exit QCP Application" in *UC – QCP.01* –OR– • Click the close window icon "x" in the application window
Description	
The user decides to end QCP application. The application shuts down all communications.	
Process Description	
Primary Process Scenario	**Exit QCP Application**
Step 1	QCP application presents to the user: • A request to confirm exit, indicating: o Consequences of exit o The following processes will be ended: ▪ Network communication from the BGAN ▪ VPN connection ▪ Skypipe processing ▪ HRT Submission/Response software
Step 2	User confirms the exit action.
Step 3	QCP application: • Stops the followings:

	○ Network communication from the BGAN ○ VPN connection ○ Skypipe processing ○ HRT Submission/Response software • Resets "Standby" mode to its default status, i.e. out of standby • Resets "Training" mode to its default status, i.e. out of training • QCP application terminates.
Exceptions, Error Situations:	• Error – An error message is displayed if QCP application cannot stop any or all of the followings : ○ Network communication from the communication ○ VPN connection ○ Skypipe processing ○ HRT Submission/Response software
Alternate Process Scenario 1	**Exit QCP application via close window icon "x"**
Step 1	User clicks the close window icon "x" in the application window.
Step 2	QCP application presents to the user: • A request to confirm exit, indicating: ○ Consequences of exit ▪ Any unsaved data will be lost • The following processes will be ended: ○ Network communication from the communication ○ VPN connection ○ Skypipe processing ○ HRT Submission/Response software
Step 3	Same as steps 2 to 3 in primary scenario.
Open Issues/Notes	

3.2.2 — Use Case – Connection

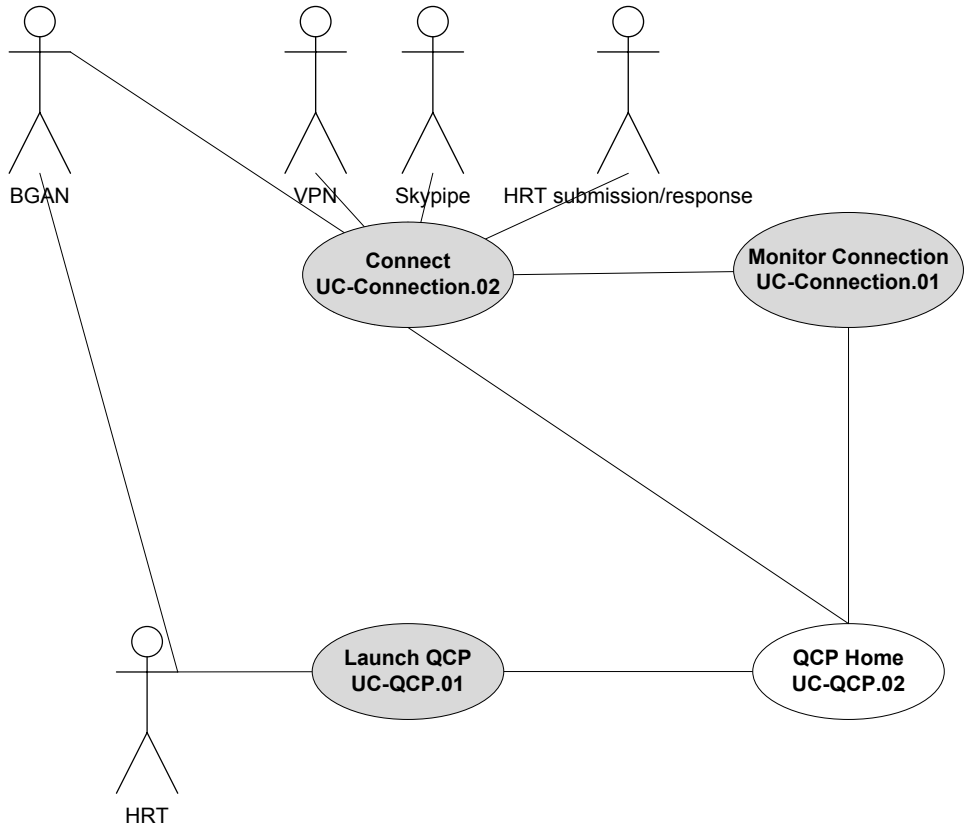

Figure 3 Connection

3.2.2.1 UC – Connection.01- Monitor Connection

UC-Connect.01	Monitor Connection
Actors	HRT member, BGAN, VPN, Skypipe, HRT submission/response
Precondition	QCP application must be launched
Postcondition	Connection status indicated
Includes	UC – Connection.02
Extends From	
Super Use Case	UC – QCP.01
Trigger	Successful launch of QCP application.
Description	

QCP application will continuously monitor the network connection and indicate the statuses of all connection components.	
Process Description	
Primary Process Scenario	**Monitor Network Connection on QCP Home**
Step 1	QCP application: • Checks to see if the BGAN network cable is connected to QCP hardware • Checks to see if the VPN account is active • Checks to see if the Skypipe is active • Checks to see if the HRT submission/response software is active • Starts submitting any "Transmitted" transactions from the transaction history. • Checks to see if there is a response to a submitted transaction
Step 2	QCP application presents to user: • Statuses: o Connection Status as active when all of the following are active: ▪ BGAN's status and signal strength ▪ VPN account status ▪ Skypipe status ▪ HRT submission/response software status o BGAN's status and signal strength o VPN account status o Skypipe status o HRT submission/response software status • Response alert notice, if there is a response: o The alert notice shall acquire window focus, i.e. shall not be hidden behind any windows o For "Hit" responses: ▪ Presents to user options to • View RAP sheet (*UC – Transaction.04*) • Close the alert notice (which shall not re-appear) ▪ QCP application automatically saves all RAP sheet(s) associated with a submission, to a pre-determined location on the computer with the submission's TCN as the folder name

	○ For "Rejected" responses, presents to user option to close the alert notice (which shall not re-appear) ○ For any given transaction submitted, the alert notice for one response type ("Hit" or "Reject") shall only appear once, regardless of the databases that the response comes from (see details in Notes below). • Option to reconnect, if Connection Status is inactive
Step 3	Primary scenario in *UC – Connection.02*, if user chooses Reconnect option in step 1
Exceptions, Error Situations:	• Exception: Connection Status is inactive when any of the following becomes inactive: ○ BGAN ○ VPN ○ Skypipe ○ HRT submission/response software • Error: BGAN's network communication is dropped ○ QCP application displays status of communication loss ○ BGAN and VPN statuses are inactive • Error: BGAN's cable is disconnected ○ QCP application displays status of cable disconnection ○ BGAN and VPN statuses are inactive • Error: VPN status is inactive, if ○ VPN client fails – OR– ○ VPN account session fails • Error: Skypipe status is inactive, if Skypipe fails • Error: HRT Submission/Response status is inactive, if HRT Submission/Response software fails
Alternate Process Scenario 1	**Monitor Network Connection (not on QCP Home)**
Step 1	Same as step 1 in primary scenario.
Step 2	QCP application presents to user: • Statuses: ○ BGAN's status and signal strength ○ Connection Status as active when all of the following

	are active: ▪ BGAN's status and signal strength ▪ VPN account status ▪ Skypipe status ▪ HRT submission/response software status • Option to re-connect (*UC – Connection.02*), if Connection Status is inactive
Exceptions, Error Situations:	Same as the primary scenario.
Open Issues/Notes	
Regarding the response alert notices for a transaction submitted, for any response type ("Hit" or "Reject"), only one alert notice shall appear : 1. When the first response comes in from any database, an alert notice will appear. 2. For any subsequent responses, an alert notice may or may not appear: an alert notice will appear only if the response is of different response type. For example, if the first response was a "Hit" and the 2nd response was also a "Hit", then the 2nd response (or any other subsequent "Hit" responses) will not trigger an alert notice to appear. If the first response was a "Hit" and the 2nd response was a "Reject", then there will be alert notices for both the 1st response and the 2nd response as they are of different response types.	

3.2.2.2 UC – Connection.02 - Connect

UC-Connect.02	**Connect**
Actors	HRT member, BGAN, VPN, Skypipe, HRT submission/response
Precondition	BGAN must be turned on and be connected to QCP hardware; QCP application must be launched
Postcondition	A network connection is established.
Includes	
Extends From	UC – Connection.01- Monitor Connection
Super Use Case	
Trigger	Successful launch of QCP application; BGAN is on and connected to QCP hardware.
Description	
Upon BGAN connection, QCP application will check for BGAN's status to be "Data," then QCP application will launch VPN client, Skypipe, and HRT submission/response software, in order, and one at a time.	
Process Description	

Primary Process Scenario	**Network Connection**
Step 1	QCP application: • Checks to see if the BGAN network cable is connected to QCP hardware • checks to see if the status is "Data"
Step 2	QCP application launches VPN and passes QCP default username and default password to VPN.
Step 3	• User selects a connection entry and starts connecting to VPN • *Optionally*, user overwrites the default username and password • VPN server authenticates user
Step 4	QCP application launches Skypipe.
Step 5	• QCP application launches HRT submission/response software. • Upon successful launch, all HRT submissions/response software windows shall be minimized.
Exceptions, Error Situations:	• Error: VPN authentication fails o QCP application halts until VPN authentication success • Exceptions/Errors: same as in UC-Connection.01
Open Issues/Notes	

3.2.3 — Use Case – Personal Data

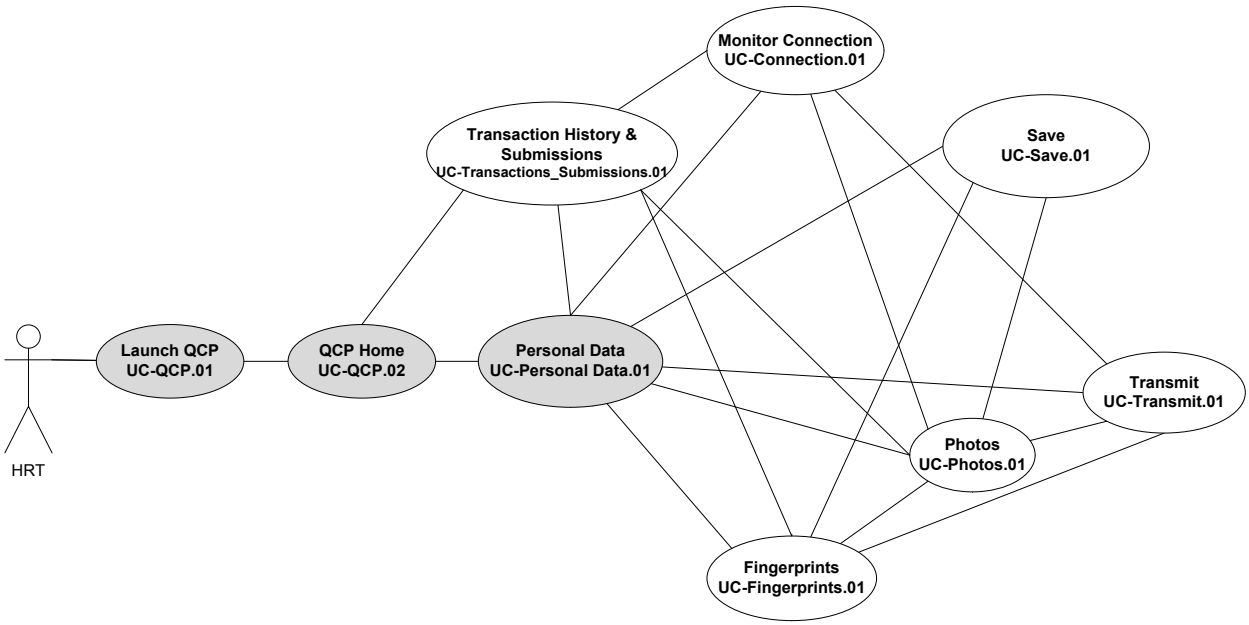

Figure 4 Personal Data

3.2.3.1 UC – Personal Data.01

UC- Personal Data.01	Personal Data
Actors	HRT member
Precondition	QCP application successfully launched
Postcondition	Personal data details displayed
Includes	UC – Connection.01
Extends From	
Super Use Case	UC – QCP.01
Trigger	User decides to access personal data feature of the QCP application.
Description	
The *Personal Data* area provides information pertaining to the biometric presenter and the nature of the operation. Data entry fields are presented for editable transactions such as new transactions, untransmitted transactions and transactions being updated. For transmitted transaction, data will be presented in a view-only manner.	
Process Description	
Primary Process Scenario	**Personal Data Entry for a New Transaction**

Step 1	QCP application presents to the user:
	• TCN (Transaction Number)
	• Options to (only available for Slaps transactions)
	  o Enter personal data for living presenter (default)
	  o Enter personal data for deceased presenter
	• Personal data entry fields (*see Appendix A* for a list of fields)
	• For Query (TOT=TPRS) transactions, "Type of Search" field will be set to "Query only" and cannot be edited.
	• Indication of:
	  o Mandatory fields
	  o Expected field formats
	  o Field length limits
	  o Mandatory fields completion status
	• A subset of the entry fields:
	  o whose values can be saved as defaults for future transactions
	  o filled with previous saved values
	• For fields with options to choose from:
	  o A default value from the options
	  o Method(s) to choose among the options
	• Options to access:
	  o Fingerprints feature (Primary scenario UC – Fingerprints.01 if no fingerprints exist, or Alternate scenario in UC – Fingerprints.01 if fingerprints exist)
	  o Photos feature (Primary scenario UC – Photos.01 if no photos exist, or Alternate scenario in UC – Photos.01 if photos exist)
	• Options to access:
	  o UC – QCP.02 (QCP Home)
	  o UC – Transactions_Submissions.01 (Transaction History and Submissions)
	  o UC – Transmit.01 (conditional, see Exception)
	  o UC – Save. 01 (conditional, see Exception)

Step 2	User fills in an entry field.

Step 3	QCP application presents to the user: • Indication of mandatory fields completion status • For a subset of text entry fields (see *Appendix A*): o "Predictive text entry" – as the user types characters into an entry field, the QCP application shall display any previously entered values that start with the entered characters for user to choose from.
Step 4	Repeat steps 2-3 until all mandatory fields are entered, if desired. • There shall be a method to sequentially navigate among the entry fields, following the order presented in *Appendix A*.
Exceptions, Error Situations:	• Exception: "Transmit" will only be available - o when all mandatory data (including personal data, and fingerprints) are completed o HRT Submission/Response software is available • Exception: "Save" will only be available - o when there are changes made since data was last saved • Error: For date fields, the application shall display an error indication if user enters: o A month - ▪ Greater than 12 ▪ Less than 1 o A day - ▪ Less than 1 ▪ Greater than the number of days in a month ▪ Greater than 29 for February in a leap year • Error: the application shall display an error indication if user enters characters exceeding the field length limits.
Alternate Process Scenario 1	**Personal Data Entry of Deceased Presenter for a New Slaps Transaction**
Step 1	User chooses to enter personal data for deceased presenter.
Step 2	QCP application pre-fills the name fields as the following: • Last Name: "Unknown" • Middle Name: "X" • First Name: "X"
Step 3	Same as Steps 2-4 as in primary scenario.

Alternate Scenario Exceptions:	• Same as in primary scenario. • Exception: if user decides **not** to enter personal data for deceased presenter, QCP application shall remove the X's from the name fields and proceed as in primary scenario of *UC – Personal Data.01*.
Alternate Process Scenario 2	**Personal Data Entry for an Existing, Untransmitted Transaction**

Step 1	QCP application presents to the user:
	• Existing TCN (Transaction Number)
	• Indication of type of personal data (living or deceased)
	• Options to (only available for Slaps transactions)
	  o Enter personal data for living presenter
	  o Enter personal data for deceased presenter
	• Personal data entry fields (*see Appendix A* for a list of fields) filled with previous saved values
	• For Query (TOT=TPRS) transactions, "Type of Search" field will be set to "Query only" and cannot be edited.
	• Indication of:
	  o Mandatory fields
	  o Expected field formats
	  o Field length limits
	  o Mandatory fields completion status
	• A subset of the entry fields
	  o whose values can be saved as defaults for future transactions
	  o filled with previous saved values
	• For fields with options to choose from:
	  o A default value from the options
	  o Method(s) to choose among the options
	• Options to access:
	  o Fingerprints feature (Primary scenario in UC – Fingerprints.01 if no fingerprints exist, or Alternate scenario in UC – Fingerprints.01 if fingerprints exist)
	  o Photos feature (Primary scenario UC – Photos.01 if no photos exist, or Alternate scenario in UC – Photos.01 if photos exist)
	• Options to access:
	  o UC – QCP.02 (QCP Home)
	  o UC – Transactions_Submissions.01 (Transaction

	History and Submissions) o UC – Transmit.01 (conditional, see Exception) o UC – Save. 01 (conditional, see Exception)
Step 2	• Steps 2-4 as in primary scenario, if for living presenter. • Steps 2-3 as in alternate scenario 1, if for deceased presenter.
Alternate Scenario Exceptions:	Same as in primary scenario.
Alternate Process Scenario 3	**View only Personal Data for a Transmitted Transaction**
Step 1	QCP application presents to the user: • Existing TCN (Transaction Number) • Indication of type of personal data (living or deceased) • Non-editable Personal data entry fields (*see Appendix A* for a list of fields) filled with values • Options to access: o Fingerprints feature (Alternate scenario 1 in UC – Fingerprints.04) o Photos feature (Alternate scenario in UC – Photos.04) o View RAP sheet for a "Hit" response (Alternate scenario 2 UC – Transaction.04) • Options to access: o UC – QCP.02 (QCP Home) o UC – Transactions_Submissions.01 (Transaction History and Submissions) • Option to Update the transaction (*UC – Transaction.03*)
Alternate Scenario Exceptions:	Same as in primary scenario.
Open Issues/Notes	

3.2.4 — Use Case – Capture Fingerprints

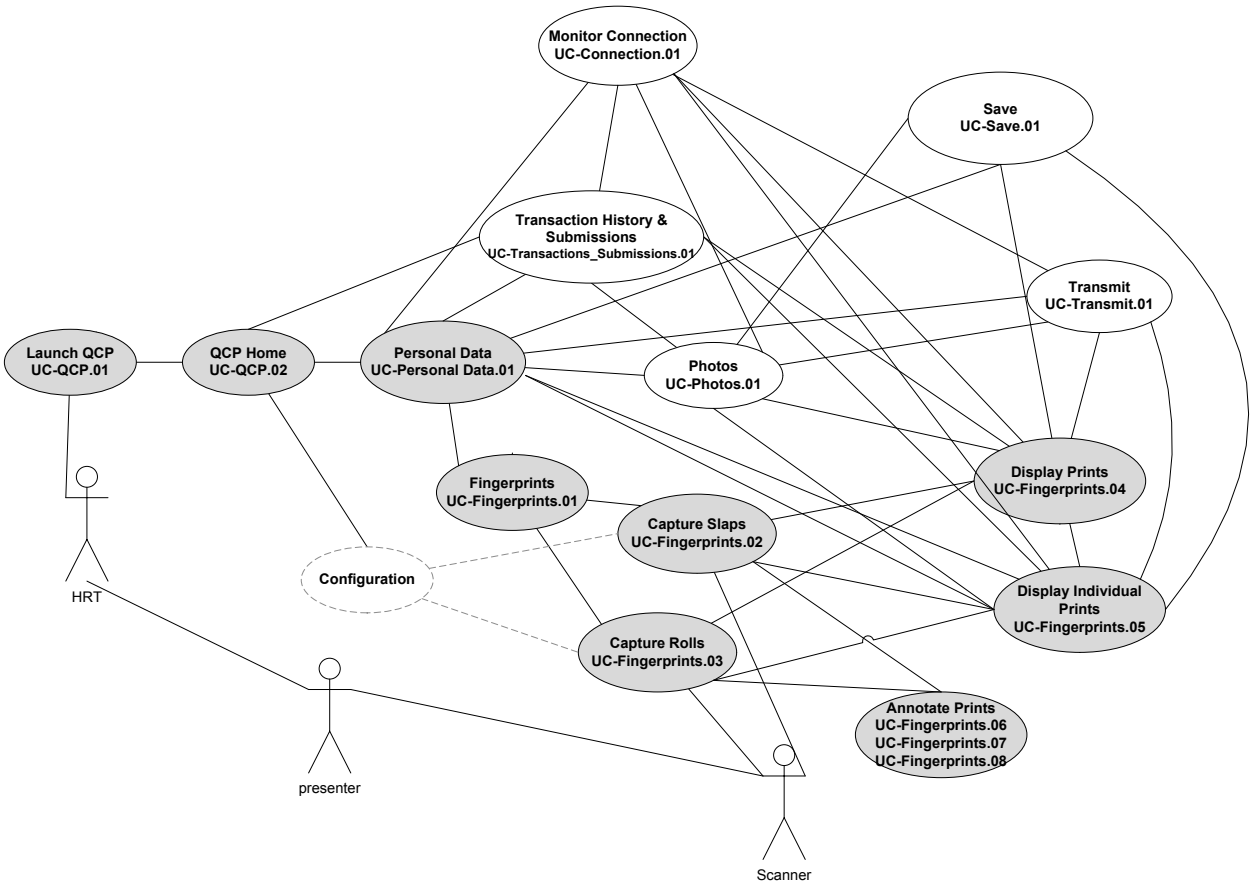

Figure 5 Capture Fingerprints (Slap, Rolls, Display, and Annotation)

3.2.4.1 UC – Fingerprints.01

UC- Fingerprints.01	Fingerprints
Actors	HRT member
Precondition	QCP application successfully launched
Postcondition	Fingerprints displayed
Includes	
Extends From	
Super Use Case	UC – QCP.01
Trigger	User decides to access fingerprints feature of the QCP application.
Description	

The *Fingerprints* area provides access to fingerprint capturing process or to the display of fingerprints.	
Process Description	
Primary Process Scenario	**New Fingerprints**
Step 1	QCP application presents to the user: • An indication of the scanner readiness
Step 2	• *UC – Fingerprints.02* if user selects create new slaps transaction option in UC- QCP.01. • *UC – Fingerprints.03* if user selects create new rolls transaction option in UC – QCP.01.
Exceptions, Error Situations:	• Error: scanner is not connected o QCP application indicates the disconnection of the scanner and prompts the user to connect the scanner o The options to capture slaps or rolls are inactive • Error: scanner fails o QCP application indicates the failure of the scanner o The options to capture slaps or rolls are inactive
Alternate Process Scenario	**Existing Fingerprints**
Step 1	*UC – Fingerprints.04* to display fingerprints.
Open Issues/Notes	

3.2.4.2 UC – Fingerprints.02

UC- Fingerprints.02	**Capture Slaps**
Actors	HRT member, Presenter, Scanner
Precondition	The user has chosen the fingerprints feature of QCP application.
Postcondition	The slaps capturing process is completed.
Includes	UC – Connection.01
Extends From	
Super Use Case	UC – Fingerprints.01
Trigger	The user selects Capture Slaps option in UC – QCP.01.
Description	

The *Capture Slaps* process provides a pre-determined slaps capture sequence and the opportunity to annotate any prints.	
Process Description	
Primary Process Scenario	**Initial fingerprint capture**
Step 1	QCP application presents to the user: • List of capture sequence • An indication of what the currently expected print is, with option for user to choose different expected print • A display of platen and active capture area • The capture status of any print • Options to: o Annotate any prints (UC – Fingerprints.06) o Modify annotations (UC – Fingerprints.08) • Options to: o Determine fingerprint capture process completion o Cancel fingerprint capture process
Step 2	• Presenter places requested print on scanner platen. • QCP application displays to the user: o print image from scanner o indication if the print is outside of the active capture area
Step 3	• Scanner captures the print image after it determines that the print image is acceptable • Scanner sends the print image to QCP application for process
Step 4	QCP application presents to the user: • Indication of the next expected print in the capture sequence: o The next expected print is the first uncaptured or unannotated print in the sequence
Step 5	Repeat steps 1 to 3 until: • All print images are captured or annotated –OR– • User determines fingerprint capture process completion –OR– • User cancels fingerprint capture process. QCP application presents to the user : o a request to confirm cancellation indicating prints and annotations from the current capture process will not be saved

	o Alternate scenario 2 in UC – Fingerprints.04, upon user confirmation
Step 6	*UC – Fingerprints.04* (Display Fingerprints)
Exceptions, Error Situations:	• Exception: a print image is rejected, QCP application displays to the user: o the reason for rejection o option to retake or accept the print image • Exception: a print is missing, QCP application prompts user to annotate (*UC – Fingerprints.07*). • Error: scanner fails o QCP application indicates the failure of the scanner o The options to capture slaps or rolls are inactive
Alternate Process Scenario	**Fingerprint modification**
Step 1	Initially, QCP application presents to the user: • List of capture sequence that includes only the selected prints: o The selected prints shall follow their relative positions in the original capture sequence. o If selected prints are part of a slap, then the associated slap will be in the capture sequence (rather than the individual prints), e.g. right slap if right middle finger and right ring finger were selected. • The capture status of the selected prints in the capture sequence: o Selected prints that have existing print images will be marked as uncaptured. o Selected prints that have existing annotations will retain the annotations and be marked as annotated.
Step 2	QCP application presents to the user: • An indication of what the currently expected print is, with an option for user to choose a different expected print. • An indication of annotation for the annotated print(s), if any • A display of platen and active capture area. • The capture status of any print (captured, uncaptured, or annotated). • Options to: o Annotate any prints (UC – Fingerprints.06) o Modify/Remove annotations (UC – Fingerprints.08)

	• Options to: o Determine fingerprint capture process completion o Cancel fingerprint capture process
Step 3	For the current expected print: • If the capture status is uncaptured: o Same as in steps 2 to 3 in primary scenario for capturing the print. o –OR– o User may decide to annotate (UC – Fingerprints.06). • If the capture status is annotated: o User can modify or remove the annotation (UC – Fingerprints.08).
Step 4	• QCP application updates the capture status of the print. • QCP application advances to the next expected print in the capture sequence.
Step 5	Repeat steps 2 to 4 until: • All selected print images are captured or annotated. –OR– • User determines fingerprint capture process completion. –OR– • User cancels fingerprint capture process. QCP application presents to the user : o a request to confirm cancellation indicating prints and annotations from the current capture process will not be saved o Alternate scenario 2 in UC – Fingerprints.04, upon user confirmation.
Step 6	Modification results will be reflected in *UC – Fingerprints.04* (display fingerprints).
Alternate Scenario Exceptions:	Same as in primary scenario.
Open Issues/Notes	
In step 3 of the primary scenario, the exchange of data between the scanner and QCP application is out of scope of this document. It needs to be specified by the development team.	

3.2.4.3 UC – Fingerprints.03

UC- Fingerprints.03	Capture Rolls

Actors	HRT member, Presenter, Scanner
Precondition	The user has chosen the fingerprints feature of QCP application.
Postcondition	The rolls capturing process is completed.
Includes	UC – Connection.01
Extends From	
Super Use Case	UC – Fingerprints.01
Trigger	The user selects Capture Rolls option in UC – QCP.01.
Description	
The *Capture Rolls* process provides a pre-determined roll capture sequence and the opportunity to annotate any prints.	
Process Description	
Primary Process Scenario	**Initial fingerprint capture**
Step 1	• List of capture sequence • An indication of what the currently expected print is, with option for user to choose different expected print • A display of platen and active capture area • The capture status of any print • Options to: o Annotate any prints (UC – Fingerprints.06) o Modify annotations (UC – Fingerprints.08) • Options to: o Determine fingerprint capture process completion o Cancel fingerprint capture process
Step 2	• Presenter places requested print on scanner platen • QCP application displays to the user: o print image from scanner o indication if the print is outside of the active capture area
Step 3	• Scanner captures the print image after it determines that the print image is acceptable • Scanner sends the print image to QCP application for process
Step 4	QCP application presents to the user: • Indication of the next expected print in the capture sequence: o The next expected print is the first uncaptured or unannotated print in the sequence
Step 5	Repeat steps 1 to 3 until: • All print images are captured or annotated

	–OR– • User determines fingerprint capture process completion –OR– • User cancels fingerprint capture process. QCP application presents to the user : o a request to confirm cancellation indicating prints and annotations from the current capture process will not be saved o Alternate scenario 2 in UC – Fingerprints.04, upon user confirmation
Step 6	*UC – Fingerprints.04* (Display Fingerprints)
Exceptions, Error Situations:	• Exception: a print image is rejected, QCP application displays to the user: o the reason for rejection o option to retake or accept the print image • Exception: a print is missing, QCP application prompts user to annotate: o UC – Fingerprints.07 • Error: scanner fails o QCP application indicates the failure of the scanner o The options to capture slaps or rolls are inactive
Alternate Process Scenario	**Fingerprint modification**
Step 1	Initially, QCP application presents to the user: • List of capture sequence that includes only the selected prints: o The selected prints shall follow their relative positions in the original capture sequence. • The capture status of the selected prints in the capture sequence: o Selected prints that have existing print images will be marked as uncaptured. o Selected prints that have existing annotations will retain the annotations and be marked as annotated.
Step 2	QCP application presents to the user: • An indication of what the currently expected print is, with an option for user to choose different expected print • An indication of annotation for the annotated print(s), if any • A display of platen and active capture area • The capture status of any print (captured, uncaptured, or

	annotated) • Options to: o Annotate any prints (UC – Fingerprints.06) o Modify/Remove annotations (UC – Fingerprints.08) • Options to: o Determine fingerprint capture process completion o Cancel fingerprint capture process
Step 3	For the current expected print: • If the capture status is uncaptured: o Same as in steps 2 to 3 in primary scenario for capturing the print. o –OR– o User may decide to annotate (UC – Fingerprints.06). • If the capture status is annotated: o User can modify or remove the annotation (UC – Fingerprints.08).
Step 4	• QCP application updates the capture status of the print. • QCP application advances to the next expected print in the capture sequence.
Step 5	Repeat steps 2 to 4 until: • All selected print images are captured or annotated. –OR– • User determines fingerprint capture process completion. –OR– • User cancels fingerprint capture process. QCP application presents to the user : o a request to confirm cancellation indicating prints and annotations from the current capture process will not be saved o Alternate scenario 2 in UC – Fingerprints.04, upon user confirmation.
Step 6	Modification results will be reflected in *UC – Fingerprints.04* (display fingerprints).
Alternate Scenario Exceptions:	Same as in primary scenario.
Open Issues/Notes	
In step 3 of the primary scenario, the exchange of data between the scanner and QCP application is out of scope of this document. It needs to be specified by the development team.	

3.2.4.4 UC – Fingerprints.04

UC- Fingerprints.04	Display Fingerprints
Actors	HRT member
Precondition	QCP application successfully launched
Postcondition	All print blocks are presented with either print images or annotations.
Includes	UC – Connection.01
Extends From	UC – Fingerprints.01
Super Use Case	
Trigger	Successful capture of print images (UC – Fingerprints.02 or UC – Fingerprints.03).
Description	
The application displays print blocks containing captured print images or annotations with associated names.	
Process Description	
Primary Process Scenario	**Display of successfully captured print images**
Step 1	QCP application presents to the user: • Individual fingerprint images or annotations (complete annotation , not just the annotation code) with associated names: o Right thumb o Right index o Right middle o Right ring o Right little o Left thumb o Left index o Left middle o Left ring o Left little • For slap images or annotations (complete annotation , not just the annotation code) with associated names: o Right slap o Right slap thumb o Left slap o Left slap thumb • Options to: o View enlarged individual print images or annotations

	(complete annotation , not just the annotation code) with associated names (UC – Fingerprints.05) o Modify print(s) ▪ All prints –OR– ▪ Select print(s), i.e. print images or annotated prints, to modify • Options to access: o Personal Data feature (Primary scenario in UC – Personal Data.01 for living presenter, or Alternate scenario 1 in UC – Personal Data.01 for deceased presenter) o Photos feature (Primary scenario UC – Photos.01 if no photos exist, or Alternate scenario in UC – Photos.01 if photos exist) • Options to access: o UC – QCP.02 (QCP Home) o UC – Transactions_Submissions.01 (Transaction History and Submissions) o UC – Transmit.01 (conditional, see Exception) o UC – Save. 01(conditional, see Exception)
Step 2	If user selects print(s) to modify, QCP application presents: • Indication of the selected print(s)
Step 3	User decides to start the modification process: • Alternate scenario in *UC – Fingerprints. 02* for slaps • Alternate scenario in *UC – Fingerprints.03* for rolls
Exceptions, Error Situations:	• Exception: display of print images is determined by the capture list, so not all print images listed in Step 1 may be available for display • Exception: "Transmit" will only be available - o when all mandatory data (including personal data, and fingerprints) are completed o HRT Submission/Response software is available • Exception: "Save" will only be available - o when there are changes made since data was last saved
Alternate Process Scenario 1	**View only display of print images for a transmitted transaction**

Step 1	• QCP application presents to the user: • Individual fingerprint images or annotations (complete annotation , not just the annotation code) with associated names: o Right thumb o Right index o Right middle o Right ring o Right little o Left thumb o Left index o Left middle o Left ring o Left little • For slap images or annotations (complete annotation , not just the annotation code) with associated names: o Right slap o Right slap thumb o Left slap o Left slap thumb • Options to: o View enlarged individual print images or annotations (complete annotation , not just the annotation code) with associated names (Alternate scenario in UC – Fingerprints.05) • Options to access: o Personal Data feature (Alternate scenario 3 in UC – Personal Data.01) o Photos feature (Alternate scenario in UC – Photos.04) o View RAP sheet for a "Hit" response (Alternate scenario 2 UC – Transaction.04) • Options to access: o UC – QCP.02 (QCP Home) o UC – Transactions_Submissions.01 (Transaction History and Submissions) • Option to Update the transaction (*UC – Transaction.03*)
Alternate Scenario Exceptions:	Same as in primary scenario.

Alternate Process Scenario 2	**Display of print blocks if capture process is cancelled**
Step 1	QCP application presents to the user: • Print blocks with: o Any fingerprint images or annotations from previously successful capture process, i.e. non-cancelled process (Primary scenario in UC – Fingerprints.04) –OR– o Empty print blocks, if there are no previously captured prints • Option to Capture fingerprints • Options to access: o Personal Data feature (Primary scenario in UC – Personal Data.01 for living presenter, or Alternate scenario 1 in UC – Personal Data.01 for deceased presenter) o Photos feature (Primary scenario UC – Photos.01 if no photos exist, or Alternate scenario in UC – Photos.01 if photos exist) • Options to access: o UC – QCP.02 (QCP Home) o UC – Transactions_Submissions.01 (Transaction History and Submissions) o UC – Transmit.01 (conditional, see Exception) o UC – Save.01 (conditional, see Exception)
Step 2	If user decides to start the fingerprint capture process: • Primary scenario in *UC – Fingerprints. 02* for slaps • Primary scenario in *UC – Fingerprints.03* for rolls
Alternate Scenario Exceptions:	• Exception: "Transmit" will only be available - o when all mandatory data (including personal data, and fingerprints) are completed o HRT Submission/Response software is available • Exception: "Save" will only be available - o when there are changes made since data was last saved
Open Issues/Notes	

HRT Review (Dec.09,'08) – A big question from HRT, is there a way to indicate if the prints are "good enough" for possible matching? [NIST] This is a complicated issue that can't be solved in the UI design. If some sort of quality checking algorithm can be embedded in the QCP application, it won't be too difficult for the UI to present some feedback to users if any prints are recommended to be re-taken.

3.2.4.5 UC – Fingerprints.05

UC- Fingerprints.05	**Display Individual Prints**
Actors	HRT member
Precondition	Successful UC – Fingerprints.04 (Primary scenario and Alternate scenario 1)
Postcondition	Individual print images or print annotation displayed
Includes	UC – Connection.01
Extends From	UC – Fingerprints.04
Super Use Case	
Trigger	User decides to view an enlarged print image or annotated print.
Description	
The application displays enlarged individual print images or annotations with associated names. Also, navigation among individual prints is provided.	
Process Description	
Primary Process Scenario	**Display of an enlarged print for an untransmitted transaction**
Step 1	User selects the option to view an enlarged print image or an annotated print.
Step 2	QCP application presents to the user: • The enlarged print image fitted to the fingerprint display area or the annotated print (complete annotation , not just the annotation code) of interest with the associated name • Options to: o View the enlarged print image at 100%, 110%, 120%, 130%, 140%, 150%. o For views above 100%, there shall be a method to move the print image within the view port o Navigate to previous or next enlarged print image or annotated print o Navigate back to display all prints (UC – Fingerprints.04) o Modify the current print (Alternate scenario in UC –

	Fingerprints.02 for slaps or alternate scenario in UC – Fingerprints.03 for rolls) • Options to access: o Personal Data feature (Primary scenario in UC – Personal Data.01 for living presenter, or Alternate scenario 1 in UC – Personal Data.01 for deceased presenter) o Photos feature (Primary scenario UC – Photos.01 if no photos exist, or Alternate scenario in UC – Photos.01 if photos exist) • Options to access: o UC – QCP.02 (QCP Home) o UC – Transactions_Submissions.01 (Transaction History and Submissions) o UC – Transmit.01 (conditional, see Exception) o UC – Save.01 (conditional, see Exception)
Step 3	User chooses one of the options presented.
Exceptions, Error Situations:	• Exception: "Transmit" will only be available - o when all mandatory data (including personal data, and fingerprints) are completed o HRT Submission/Response software is available • Exception: "Save" will only be available - o when there are changes made since data was last saved
Alternate Process Scenario	**Display of an enlarged print for a transmitted transaction**
Step 1	User selects the option to view an enlarged print image or an annotated print
Step 2	QCP application presents to the user: • The enlarged print image fitted to the fingerprint display area or the annotated print (complete annotation , not just the annotation code) of interest with the associated name • Options to: o View the enlarged print image at 100%, 110%, 120%, 130%, 140%, 150%. o For views above 100%, there shall be a method to move the print image within the view port o Navigate to previous or next enlarged print image or

	annotated print o Navigate back to display all prints (Alternate scenario 1 in UC – Fingerprints.04) • Options to access: o Personal Data feature (Alternate scenario 3 in UC – Personal Data.01) o Photos feature (Alternate scenario in UC – Photos.04) o View RAP sheet for a "Hit" response (Alternate scenario 2 in UC – Transaction.04) • Options to access: o UC – QCP.02 (QCP Home) o UC – Transactions_Submissions.01 (Transaction History and Submissions) • Option to Update the transaction (*UC – Transaction.03*)
Step 3	User chooses one of the options presented.
Open Issues/Notes	
If user accesses other features (e.g. Personal Data, Photos, etc.), then comes back to Fingerprints feature, QCP application shall present the last viewed print.	

3.2.4.6 UC – Fingerprints.06

UC- Fingerprints.06	**Annotate Prints – User Initiated**
Actors	HRT member
Precondition	QCP application successfully launched
Postcondition	User specified prints annotated
Includes	
Extends From	
Super Use Case	UC – Fingerprints.02 or UC – Fingerprints.03
Trigger	The user decides to annotate prints
Description	
During fingerprint capture process, user can choose to annotate any prints. The annotated prints will be skipped from the capture sequence.	
Process Description	
Primary Process Scenario	**Slap Annotation**
Step 1	User chooses a slap print to annotate.
Step 2	QCP application presents to the user: • Options to select individual slap component(s)

	• Annotation choices for each selected component, choices available are: o Unable to print (default) o Amputated
Step 3	User decides what slap component(s) to annotate and selects from annotation choices.
Step 4	QCP application presents to the user: • Indication of annotation for the annotated slap • If the capture sequence includes any fingerprints corresponding to annotated slap components, o indication of annotation for the annotated fingerprints o indication that the fingerprints will be skipped • If all slap components are annotated, an indication that the slap will be skipped from the capture sequence
Step 5	Repeat steps 1-4 for other slap prints if desired.
Exceptions, Error Situations:	NA
Alternate Process Scenario	**Individual Finger Annotation**
Step 1	User chooses an individual fingerprint to annotate.
Step 2	QCP application presents to the user: • Annotation choices o Unable to print (default) o Amputated
Step 3	User selects from annotation choices.
Step 4	QCP application presents to the user: • Indication of annotation for the annotated fingerprint • Indication of annotation for the corresponding slap that includes the annotated fingerprint • Indication that the annotated print will be skipped from the capture sequence • If all fingerprints of a slap are annotated, an indication that the slap will be skipped from the capture sequence
Step 5	Repeat steps 1-4 for other prints if desired.
Alternate Scenario Exceptions:	NA
Open Issues/Notes	

3.2.4.7 UC – Fingerprints.07

UC- Fingerprints.07	Annotate Prints – QCP Application Initiated
Actors	HRT member
Precondition	QCP application successfully launched
Postcondition	Missing prints annotated
Includes	
Extends From	
Super Use Case	UC – Fingerprints.02 or UC – Fingerprints.03
Trigger	QCP application detects fingerprint(s) missing from captured slap print image
Description	
During fingerprint capture process, if QCP application detects any missing prints, it will prompt user to annotate the missing prints.	
Process Description	
Primary Process Scenario	**QCP-initiated Annotation**
Step 1	QCP application presents to the user: • Indication of number of missing print(s) • For slap, options to select individual slap component(s) • Annotation choices for each missing print, choices (no default should be set) available are: o Unable to print o Amputated
Step 2	User: • If slap, decides what slap component(s) to annotate • Selects from annotation choices
Step 3	QCP application presents to the user: • Indication of annotation for the annotated print or slap • If the capture sequence includes any finger prints corresponding to annotated slap components, o indication of annotation for the annotated fingerprints o indication that the fingerprints will be skipped
Exceptions, Error Situations:	• Exception: QCP application shall not allow user to annotate more than the missing prints.

Open Issues/Notes
For annotating individual fingers, user will have to initiate the annotation.

3.2.4.8 UC – Fingerprints.08

UC- Fingerprints.08	Modify/Remove Annotation
Actors	HRT member
Precondition	QCP application successfully launched
Postcondition	Annotation(s) successfully modified or removed
Includes	
Extends From	
Super Use Case	Alternate scenario in UC – Fingerprints.02 or UC – Fingerprints.03
Trigger	User decides to modify/remove annotation.
Description	
During fingerprint capture process, for any previously annotated prints, user can choose to modify or remove the annotations.	
Process Description	
Primary Process Scenario	**Modify/Remove Slap Annotation**
Step 1	User chooses a slap annotation to modify/remove.

Step 2	QCP application presents to the user:
	• Existing annotation(s)
	• Options to select/deselect individual slap component(s)
	• Annotation choices for each selected component, choices available are:
	  o Unable to print
	  o Amputated
	• Option to remove existing annotation

Step 3	User decides what slap component(s) to modify.
Step 4	QCP application presents to the user: • Indication of annotation for the annotated print • If the capture sequence includes any fingerprints corresponding to annotated slap components, an indication that the fingerprints will be skipped • If all slap components are annotated, an indication that the slap will be skipped from the capture sequence • Allow fingerprint capture for any unannotated slap components • If all slap components are unannotated, an indication that the

	slap will be included in the capture sequence
Step 5	Repeat steps 1-4 for other slap prints if desired.
Exceptions, Error Situations:	NA
Alternate Process Scenario	**Modify/Remove Individual Finger Annotation**
Step 1	User chooses an individual fingerprint annotation to modify/remove.

Step 2	QCP application presents to the user:
	• Existing annotation
	• Option to modify annotation, choices available are:
	  o Unable to print
	  o Amputated
	• Option to remove annotation

Step 3	User selects an annotation option.
Step 4	QCP application presents to the user: • Indication of annotation for the annotated fingerprint • Indication of annotation for the corresponding slap that includes the annotated fingerprint • Indication that the annotated print will be skipped from the capture sequence • If all fingerprints of a slap are annotated, an indication that the slap will be skipped from the capture sequence • Allow capture for any unannotated fingerprint • If all slap components are unannotated, an indication that the slap will be included in the capture sequence. • If a print's annotation is removed, the capture status for the print becomes "unannotated" and the print will be put back onto the capture sequence.
Step 5	Repeat steps 1-4 for other prints if desired.
Alternate Scenario Exceptions:	NA
Open Issues/Notes	

3.2.5 Use Case – Photos

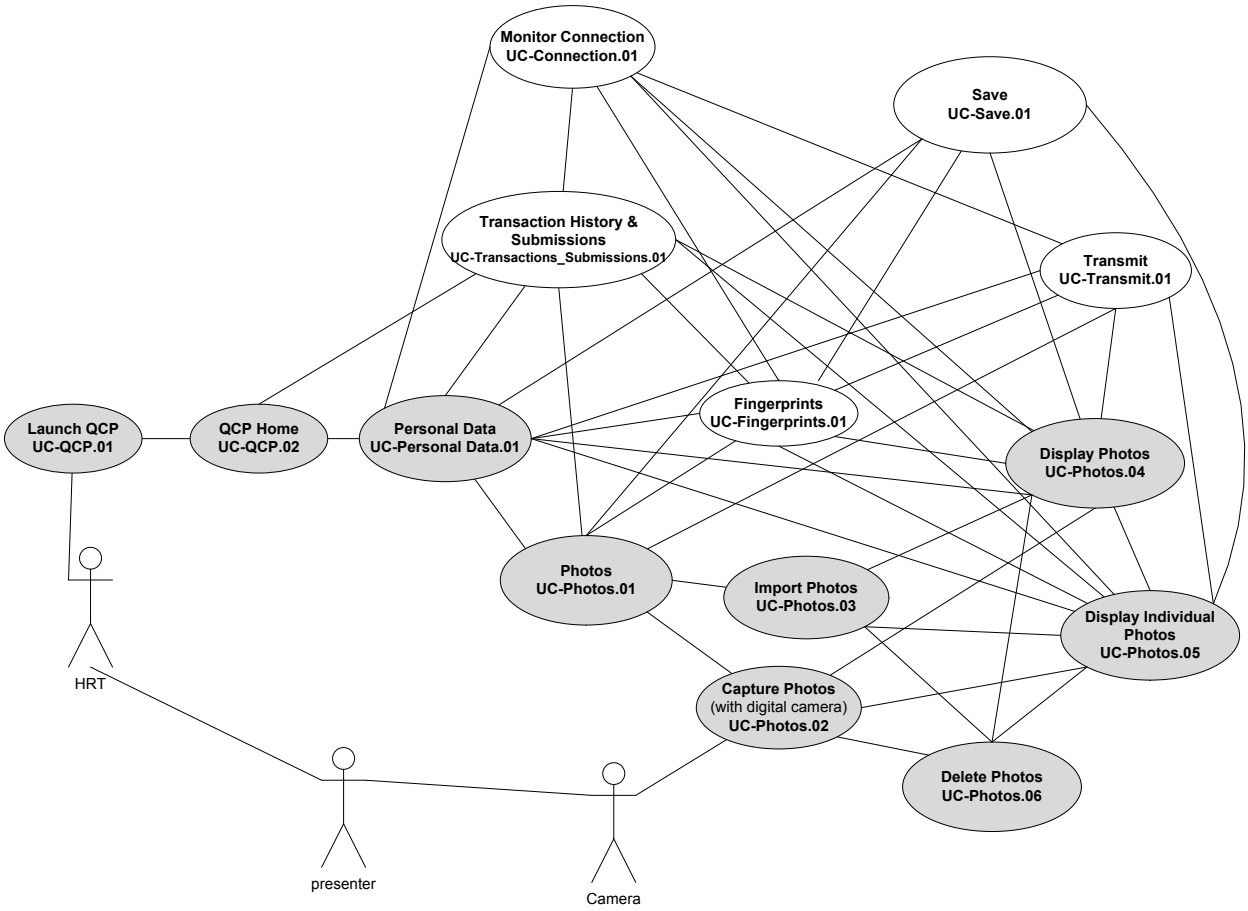

Figure 6 Photos

3.2.5.1 UC – Photos.01

UC- Photos.01	Photos
Actors	HRT member, presenter, embedded digital camera (optional)
Precondition	QCP application successfully launched
Postcondition	Photos displayed
Includes	UC – Connection.01
Extends From	
Super Use Case	
Trigger	User decides to access photos feature of the QCP application.
Description	

The *Photos* area provides access to photo capturing process (including taking pictures with an embedded digital camera or import pictures from files) or to the display of photos.	
Process Description	
Primary Process Scenario	**New Photos**
Step 1	QCP application presents to the user: • Options to: o Capture photos with an embedded digital camera (if available) o Import photos • Options to access: o Personal Data feature (Primary scenario in UC – Personal Data.01 for living presenter, or Alternate scenario 1 in UC – Personal Data.01 for deceased presenter) o Fingerprints feature (Primary scenario UC – Fingerprints.01 if no fingerprints exist, or Alternate scenario in UC – Fingerprints.01 if fingerprints exist) • Options to access: o UC – QCP.02 (QCP Home) o UC – Transactions_Submissions.01 (Transaction History and Submissions) o UC – Transmit.01 (conditional, see Exception) o UC – Save. 01 (conditional, see Exception)
Step 2	• *UC – Photos.02* if user selects capture photos with camera option in Step 1. • *UC – Photos.03* if user selects import photos option in Step 1.
Exceptions, Error Situations:	• Exception: "Transmit" will only be available - o when all mandatory data (including personal data, and fingerprints) are completed o HRT Submission/Response software is available • Exception: "Save" will only be available - o when there are changes made since data was last saved
Alternate Process Scenario	**Existing Photos**
Step 1	*UC – Photos.04* (Display Photos)

Open Issues/Notes

3.2.5.2 UC – Photos.02

UC- Photos.02	Capture Photos with an Embedded Digital Camera
Actors	HRT member, Presenter, Embedded Digital Camera
Precondition	The user has chosen the photos feature of QCP application.
Postcondition	The photos capturing process is completed.
Includes	
Extends From	
Super Use Case	UC – Photos.01
Trigger	User chooses to capture photos with an embedded digital camera.
Description	
The user may use a digital camera embedded in the QCP hardware to take pictures.	
Process Description	
Primary Process Scenario	**Photos capture (camera embedded in the computer)**
Step 1	QCP application presents to the user: • Indication of camera readiness • A display of active view finder • An area containing indication of temporary pictures taken • Options to: o Take picture o Display or hide (default) an overlay guide for photo taking o Delete temporary picture(s) (Primary scenario in UC – Photos.06) o Determine photo capture process completion
Step 2	User points camera toward the presenter, e.g. face, profile, etc.
Step 3	QCP application displays to the user a preview of the content of the view finder.
Step 4	User takes the picture.
Step 5	QCP application presents to user: • Indication of the picture taken in the temporary area o Each picture will be assigned a label by the QCP application

Step 6	Repeat steps 1to 5 until user determines photos capture process completion.
Step 7	*UC – Photos.04* (Display Photos).
Exceptions, Error Situations:	NA
Open Issues/Notes	

3.2.5.3 UC – Photos.03

UC- Photos.03	**Import Photos**
Actors	HRT member
Precondition	The user has chosen the photos feature of QCP application.
Postcondition	The photos importing process is completed.
Includes	
Extends From	
Super Use Case	UC – Photos.01
Trigger	User chooses to import photos.
Description	
The user can import photos from sources outside of the QCP application.	
Process Description	
Primary Process Scenario	**Import Photos**
Step 1	QCP application presents to the user: • A way to browse and locate the photo(s) • Indication of supported file format(s)
Step 2	User locates and selects photo(s) of interest.
Step 3	User decides to import the photos.
Step 4	*UC – Photos.04* (Display Photos).
Exceptions, Error Situations:	NA
Open Issues/Notes	

3.2.5.4 UC – Photos.04

UC- Photos.04	Display Photos
Actors	HRT member
Precondition	The user has chosen the photos feature of QCP application.
Postcondition	The photos are displayed.
Includes	UC – Connection.01
Extends From	
Super Use Case	UC – Photos.01
Trigger	• Photos captured with embedded camera (*UC – Photos.02*) –OR– • Photos imported (*UC – Photos.03*)
Description	
The QCP application displays an area that may contain any photos taken from an embedded camera or imported photos.	
Process Description	
Primary Process Scenario	**Display Photos from capture or import**
Step 1	QCP application presents to the user: • Photos captured or imported, with names: o Photo labels (if captured) –OR– o File names (if imported) • Photos are displayed in the order in which they were taken by the embedded camera or imported from files • Option to indicate whether all photos will be included for transmission with the default as not included (conditional, *see Exception*) • Options to: o View individual photos o Select photo(s) to delete (Alternate scenario 1 in UC – Photos.06) o Change photo names • Options to: o Capture photos with a embedded digital camera (if available) (UC – Photos.02) o Import photos (UC – Photos.03) • Options to access:

	○ Personal Data feature (Primary scenario in UC – Personal Data.01 for living presenter, or Alternate scenario 1 in UC – Personal Data.01 for deceased presenter) ○ Fingerprints feature (Primary scenario UC – Fingerprints.01 if no fingerprints exist, or Alternate scenario in UC – Fingerprints.01 if fingerprints exist) • Options to access: ○ UC – QCP.02 (QCP Home) ○ UC – Transactions_Submissions.01 (Transaction History and Submissions) ○ UC – Transmit.01 (conditional, see Exception) ○ UC – Save. 01 (conditional, see Exception)
Step 2	*UC – Photos.05* if user chooses to view individual photos.
Exceptions, Error Situations:	• Exception: "Transmit" will only be available - ○ when all mandatory data (including personal data, and fingerprints) are completed ○ HRT Submission/Response software is available • Exception: if user chooses not to include photos for transmission: ○ QCP application shall not check for mandatory data completeness in the Photos area for transmission • Exception: the option to include photos for transmission will only be available, if: ○ Total file (EFT) size does not exceed 1MB ○ There is at least one photo • Exception: if user chooses to delete photo(s), QCP application presents to the user a request to confirm photo deletion. • Exception: "Save" will only be available - ○ when there are changes made since data was last saved
Alternate Process Scenario	**View only display photos for a transmitted transaction**
Step 1	QCP application presents to the user: • Photos, with names, in the transaction • Photos are displayed in the order in which they were taken by the embedded camera or imported from files

	• Option to view individual photos
	• Options to access:
	  o Personal Data feature (Alternate scenario 3 in UC – Personal Data.01)
	  o Fingerprints feature (Alternate scenario 1 in UC – Fingerprints.04)
	  o View RAP sheet for a "Hit" response (Alternate scenario 2 UC – Transaction.04)
	• Options to access:
	  o UC – QCP.02 (QCP Home)
	  o UC – Transactions_Submissions.01 (Transaction History and Submissions)
	• Option to Update the transaction (*UC – Transaction.03*)

Step 2	*UC – Photos.05* if user chooses to view individual photos.
Alternate Scenario Exceptions:	Same as in primary scenario.
Open Issues/Notes	

3.2.5.5 UC – Photos.05

UC- Photos.05	**Display Individual Photos**
Actors	HRT member
Precondition	Successful UC – Photos.04
Postcondition	A single photo displayed
Includes	UC – Connection.01
Extends From	UC – Photos.04
Super Use Case	
Trigger	User decides to view an individual photo.
Description	
The QCP application displays a single photo with options to view the photo in different sizes and navigate to other photos, if available.	
Process Description	
Primary Process Scenario	**Display of a photo**
Step 1	User selects the option to view a photo.

Step 2	QCP application presents to the user: • The photo fitted to the photo display area, with options to: o View the photo at different sizes from 10% to 150%, in 10% increments. o For photos extending beyond the display area, there shall be a method to move the photo within the view port • Photo names: o Photo labels (if captured) –OR– o File names (if imported) • Navigate to previous or next photo available • Navigate back to display all photos (*UC – Photos.04*) • Options to: o Delete the photo (Alternate scenario 2 in UC – Photos.06) o Change photo name • Options to: o Capture photos with a digital camera (if available) (UC – Photos.02) o Import photos (UC – Photos.03) • Options to access: o Personal Data feature (Primary scenario in UC – Personal Data.01 for living presenter, or Alternate scenario 1 in UC – Personal Data.01 for deceased presenter) o Fingerprints feature (Primary scenario UC – Fingerprints.01 if no fingerprints exist, or Alternate scenario in UC – Fingerprints.01 if fingerprints exist) • Options to access: o UC – QCP.02 (QCP Home) o UC – Transactions_Submissions.01 (Transaction History and Submissions) o UC – Transmit.01 (conditional, see Exception) o UC – Save. 01 (conditional, see Exception)
Exceptions, Error Situations:	• Exception: if user chooses to delete a photo, QCP application presents to the user a request to confirm photo deletion. • Exception: "Transmit" will only be available - o when all mandatory data (including personal data, and

	fingerprints) are completed o HRT Submission/Response software is available • Exception: the option to include photos for transmission will only be available, if total file (EFT) size does not exceed 1MB • Exception: "Save" will only be available - o when there are changes made since data was last saved
Alternate Process Scenario	**Display of a photo for a transmitted transaction**
Step 1	User selects the option to view an enlarged photo.
Step 2	QCP application presents to the user: • The photo fitted to the photo display area, with options to: o View the photo at different sizes from 10% to 150%, in 10% increments. o For photos extending beyond the display area, there shall be a method to move the photo within the view port • Photo names • Navigate to previous or next photo available • Navigate back to display all photos *(*Alternate scenario in *UC – Photos.04*) • Options to access: o Personal Data feature (Alternate scenario 3 in UC – Personal Data.01) o Fingerprints feature (Alternate scenario 1 in UC – Fingerprints.04) o View RAP sheet for a "Hit" response (Alternate scenario 2 in UC – Transaction.04) • Options to access: o UC – QCP.02 (QCP Home) o UC – Transactions_Submissions.01 (Transaction History and Submissions) • Option to Update the transaction (*UC – Transaction.03*)
Open Issues/Notes	
If user accesses other features (e.g. Personal Data, Photos, etc.), then comes back to Fingerprints feature, QCP application shall present the last viewed print.	

3.2.5.6 UC – Photos.06

UC- Photos.06	Delete Photos
Actors	HRT member
Precondition	At least one photo available
Postcondition	Photo(s) deleted successfully
Includes	
Extends From	
Super Use Case	
Trigger	User decides to delete photo(s) from: • UC – Photos.02 (Capture photos with an embedded digital camera) –OR– • Primary scenario in UC – Photos.04 (Display photos) –OR– • Primary scenario in UC – Photos.05 (Display individual photos)
Description	
The user chooses and removes photo(s) from the QCP application.	
Process Description	
Primary Process Scenario	**Delete Photo(s) while taking pictures**
Step 1	User selects temporary picture(s) for deletion.
Step 2	QCP application presents to the user: • Indication of selected picture(s)
Step 3	• User decides to delete the selected picture(s).
Exceptions, Error Situations:	• Exception: QCP application shall not request confirmation of deleting temporary pictures.
Alternate Process Scenario 1	**Delete Photo(s) in Display Photos area**
Step 1	User selects photo(s) for deletion.
Step 2	QCP application presents to the user: • Indication of selected photo (s)
Step 3	User decides to delete the selected photo (s).
Step 4	QCP application presents to the user: • A request to confirm the deletion
Step 5	User confirms the deletion.

Step 6	QCP application removes the photos from the display photo area.
Alternate Process Scenario 2	**Delete a Photo in Display Individual Photo area**
Step 1	User decides to delete the photo.
Step 2	QCP application presents to the user: • A request to confirm the deletion
Step 3	User confirms the deletion.
Step 4	QCP application: • Removes the photo from the display individual photos area. • Displays the next available photo.
Alternate Scenario Exceptions:	• Exception: if there is no more photo available, QCP application shall take user back to the Display Photo Area (Primary scenario in *UC – Photos.01*)
Open Issues/Notes	
If user accesses other features (e.g. Personal Data, Photos, etc.), then comes back to Fingerprints feature, QCP application shall present the last viewed print.	

3.2.6 — Use Case – Transaction History and Submissions

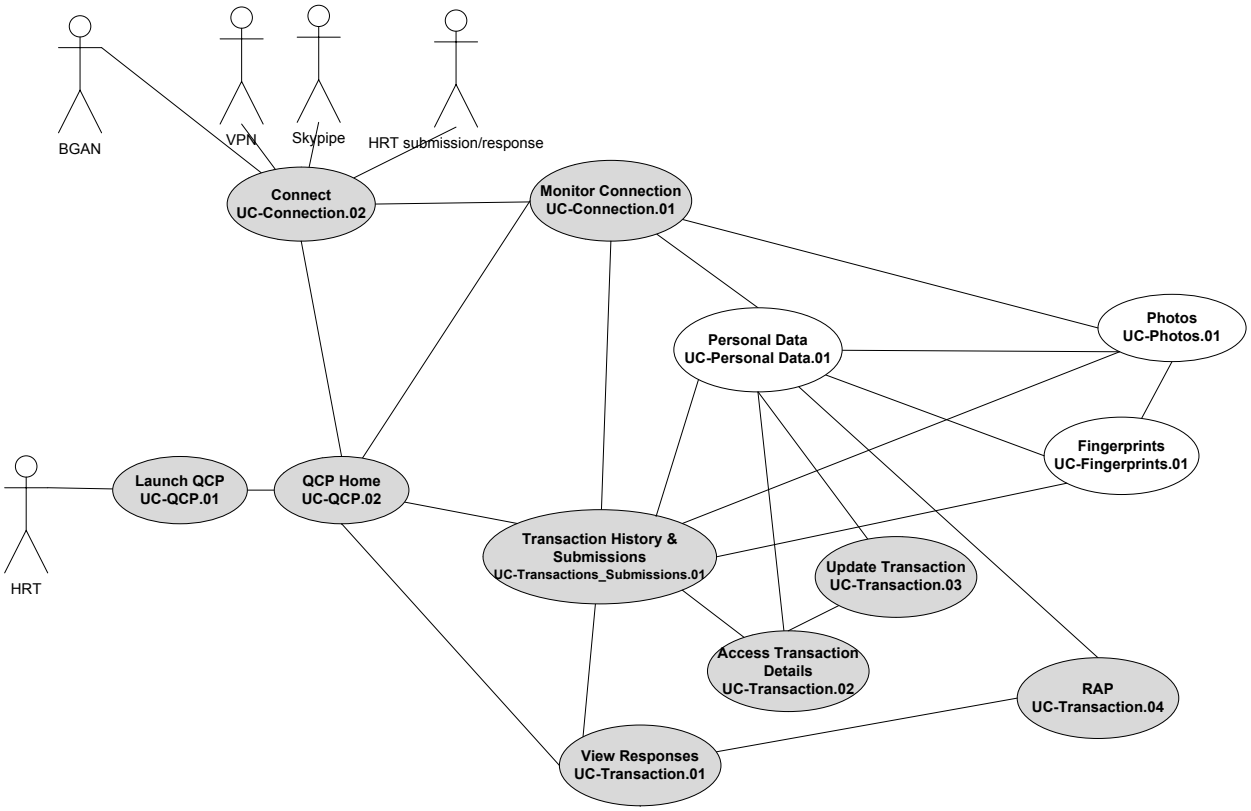

Figure 7 Transactions and Submissions

3.2.6.1 UC – Transactions_Submissions.01

UC - Transactions_ Submissions.01	Display Transaction History and Submissions
Actors	HRT member
Precondition	QCP application successfully launched
Postcondition	Transaction history and submissions displayed
Includes	UC – Connection.01
Extends From	
Super Use Case	UC – QCP.01
Trigger	User decides to access transaction history and submissions feature of the QCP application

Description	
The QCP application will display any transactions that are saved and transmitted. The ability to sort and search the transactions will be available. Note: Transactions created in operational mode and training mode will not be displayed concurrently.	
Process Description	
Primary Process Scenario	**Transaction History and Submissions**
Step 1	QCP application presents to the user: • All transactions created (see *Exception*). o Each transaction shall have the same set of attributes (see Appendix B for a list of attributes) o A transaction does not have to have a value for all attributes o There shall be a user-configurable default set of attributes for display • Indication of transaction status, possible statuses are: o *Saved* o *Transmitted*, i.e. put into a queue for submitting to databases o *Pending*, i.e. submitted to databases awaiting responses o *Responded* (with indication of number of responses) • New transaction statuses from any system initiated status change, e.g. from "pending" to "responded". • For updated transactions: o Always display the original transaction submitted o Group and display updated transactions with the original transaction, based on the chronological order of the updates starting with the oldest o Option to display/hide updated transactions • Options to o Determine the presentation order of the display attributes ▪ There shall be a default attribute presentation order o Sort display transactions based on any one attribute ▪ There shall be a default transaction display order o Resize presentation area for each display attribute

	▪ There shall be a default presentation area size for each display attribute • Options to o Search the transaction history o Import transactions o UC – QCP.02 (QCP Home)
Step 2	QCP application presents to the user for the transaction of interest: • Options to o View responses to the transaction with a status as submitted or responded o Access the details of the transaction
Step 3	• *UC – Transaction.01* if user selects View transaction responses option in step 2 • *UC – Transaction.02* if user selects access details option in step 2
Exceptions, Error Situations:	• Exception: any system initiated status changes (e.g. new response(s) to submission(s)) to the transaction history: o QCP application shall preserve any user selection(s) o QCP application shall not change position of the view port. • Exception: o Transactions created while in training mode shall only appear when QCP application is in training mode. o Transactions created while in operational mode shall only appear when QCP application is in operational mode. o Given the separation of transactions between the operational and training modes, the delete transaction function will not be necessary. • Exception on updated transactions: o Sorting will only apply to the original transaction o Sorting shall not change the order of transactions within a group
Alternate Process Scenario 1	**Search Transaction History and Submissions**
Step 1	Same as step 1 in primary scenario.
Step 2	User chooses to search the transaction history.
Step 3	QCP application presents to the user:

	• Search criteria: o Criteria fields (see Appendix C for a list of fields, a subset of the complete transaction attributes) o Indication of expected field formats o Indication of field length limits o For fields with options to choose from: ▪ A default value from the options ▪ Method(s) to choose among the options
Step 4	User specifies search criteria to apply to the transaction history.
Step 5	QCP application presents to the user: • Indication of results returned from a search. • Only transactions that meet the search criteria. o The search criteria shall always (including user's navigation away from and return to the searched list) be applied to both current and future transactions, until the user performs one of the actions below: ▪ User decides to view the entire transactions/submissions –OR– ▪ User modifies search criteria Note: Over time, transactions that meet the search criteria may change, e.g. new transactions created, or transactions' statuses changed (from "pending" to "responded"). Thus, the search criteria need to be applied to display the most current search results. • Option to view the entire (unsearched) transaction history (*UC – Transactions_Submissions.01*). • Options to o Determine the presentation order of the display attributes ▪ There shall be a default attribute presentation order o Sort display transactions based on any one attribute ▪ There shall be a default transaction order o Resize presentation area for each display attribute ▪ There shall be a default presentation area size for each display attribute • Options to o Modify search criteria

	○ UC – QCP.02 (QCP Home)
Step 6	Same as steps 2 and 3 in primary scenario.
Alternate Scenario Exceptions:	• Same as primary scenario. • Exception: if there are no transactions meeting the search criteria, QCP application shall present an indication that there are no matching transactions.
Alternate Process Scenario 2	**Import Transactions**
Step 1	Same as step 1 in primary scenario.
Step 2	User decides to import transactions.
Step 3	QCP application presents to the user a method to browse to the location of the transactions to be imported.
Step 4	User locates and selects transactions to be imported.
Step 5	QCP application presents to the user an updated transaction/submission list with the imported transactions added.
Step 6	Same as steps 2 and 3 in primary scenario.
Alternate Scenario Exceptions:	Same as primary scenario.
Open Issues/Notes	

3.2.6.2 UC – Transaction.01

UC- Transaction.01	**View Transaction Responses**
Actors	HRT member
Precondition	QCP application successfully launched
Postcondition	Transaction responses displayed
Includes	
Extends From	
Super Use Case	UC – Transactions_Submissions.01
Trigger	The user decides to view responses to a submitted or responded transaction.
Description	
The QCP application displays the databases that a transaction has been submitted to, and any responses from the databases.	

Process Description	
Primary Process Scenario	**View responses**

Step 1	QCP application presents to the user:
	• All databases
	• Response status for each database, possible statuses are:
	  o Null (no response yet)
	  o Hit
	  o Rejected
	• Date responded
	• RAP sheet "Viewed" status
	• Options to
	  o View RAP sheet for a "Hit" response
	  o UC – Transactions_Submissions.01 (Transaction History and Submissions)

Step 2	User selects to view a RAP sheet (Alternate scenario 1 in *UC – Transaction.04*).
Step 3	Repeat step 2 for all "Hit" responses, if desired.
Exceptions, Error Situations:	
Open Issues/Notes	

3.2.6.3 UC – Transaction.02

UC- Transaction.02	Access Transaction Details
Actors	HRT member
Precondition	QCP application successfully launched
Postcondition	Transaction details displayed
Includes	
Extends From	
Super Use Case	UC – Transactions_Submissions.01
Trigger	The user decides to access the details of a transaction.
Description	
The QCP application displays personal data, fingerprints, photos, and RAP sheets if any, for a transaction.	
Process Description	

Primary Process Scenario	**Transmitted Transaction Details**
Step 1	QCP application presents to the user, *view only data (non-editable)*: • Metadata: o Transaction identifier, e.g. TCN o Type of transaction o Transaction status: ▪ Transmitted ▪ Submitted ▪ Database responded (Hit or Rejected) • Personal Data feature (Alternate scenario 3 in *UC – Personal Data.01*)
Exceptions, Error Situations:	Exception: the "Update" option is only available to a transmitted transaction.
Alternate Process Scenario	**Untransmitted Transaction Details**
Step 1	QCP application presents to the user: • Metadata: o Transaction identifier, e.g. TCN o Type of transaction o Transaction status: ▪ Untransmitted • Completion status of each of the areas: personal data, fingerprints, and photos • Personal Data (Alternate scenario 2 in *UC – Personal Data.01*)
Open Issues/Notes	

3.2.6.4 UC – Transaction.03

UC- Transaction.03	**Update Transaction**
Actors	HRT member
Precondition	QCP application successfully launched
Postcondition	QCP application displays the updated transaction
Includes	
Extends From	
Super Use Case	UC – Transaction.02

Trigger	The user decides to update a transmitted transaction.
Description	
After a transaction is submitted to databases, the user can decide to submit supplemental information (e.g. rolled prints or photos) or updates to the databases. The QCP application creates a new transaction containing the same information as in the original transaction in an editable format.	
Process Description	
Primary Process Scenario	**Update Transaction**

Step 1	QCP presents to user:
	• Options to
	  o Update Record
	  o Roll Prints

Step 2	QCP application generates:
	• Metadata:
	  o A new TCN
	  o Type of transaction (CNA)

Step 3	If user chooses Update Record option in step 1: • Alternate scenario 2 in *UC – Personal Data.01*. • Fingerprint images, annotations, and print type "slaps" or "rolls" will be preserved. • Photos, if any, will be preserved. If user chooses Roll Prints option in step 1: • Alternate scenario 2 in *UC – Personal Data.01*. • Fingerprint images, and annotations will be removed. • Print type is set to "rolls". • Photos, if any, will be preserved.
Exceptions, Error Situations:	NA
Open Issues/Notes	

3.2.6.5 UC – Transaction.04

UC- Transaction.04	**View RAP Sheet**
Actors	HRT member
Precondition	QCP application successfully launched

Postcondition	RAP sheet details displayed
Includes	
Extends From	
Super Use Case	
Trigger	• User chooses to view the RAP sheet from the "Hit" alert notice (*UC – Connection.01*). –OR– • User chooses to view a RAP sheet while viewing transaction responses (*UC – Transaction.01*). –OR– • User chooses to view a RAP sheet while viewing transaction details (*UC – Transaction.02*).
Description	
The QCP application displays the RAP sheets for the transaction with "Hit" response(s).	
Process Description	
Primary Process Scenario	**View RAP sheet from "Hit" alert notice**
Step 1	QCP application presents to user: • Which database the RAP sheet comes from • The RAP sheet returned in a separate window other than the main QCP application • Option to "Copy" the content (full or partial) of the RAP sheet (conditional, see Exception) • Option to close the window
Exceptions, Error Situations:	• Exception: "Copy" will only be available when there is text selected in the RAP sheet content
Alternate Process Scenario 1	**View RAP sheet while viewing transaction responses**
Step 1	QCP application presents to user: • Which database the RAP sheet comes from • The RAP sheet returned • Option to "Copy" the content (full or partial) of the RAP sheet (conditional, see Exception) • Options to: o Navigate to other available RAP sheets for the transaction o Navigate back to view transaction responses

Step 2	• Repeat step 1 if user chooses to view other RAP sheets option • *UC – Transaction.01* if user chooses back to view transaction responses option
Alternate Scenario Exceptions:	Same as primary scenario.
Alternate Process Scenario 2	**View RAP sheet while viewing transaction details**
Step 1	QCP application presents to user: • Which database the RAP sheet comes from • The RAP sheet returned • Option to "Copy" the content (full or partial) of the RAP sheet (conditional, see Exception) • Option to navigate to other available RAP sheets for the transaction • Options to access: o Personal Data feature o Fingerprints feature o Photos feature • Options to o Update the transaction (UC – Transaction.03). o Go to QCP home (UC – QCP.02) o UC – Transactions_Submissions.01 (Transaction History and Submissions)
Step 2	• Repeat step 1 if user chooses to view other RAP sheets • Alternate scenario 3 in *UC – Personal Data.01* if user selects personal data option in step 1 • Alternate scenario 1 in *UC – Fingerprints.04* if user selects fingerprints option in step 1 • Alternate scenario *UC – Photos.04* if user selects photos option in step 1
Alternate Scenario Exceptions:	Same as primary scenario.
Open Issues/Notes	

3.2.7 — Use Case – Transmit

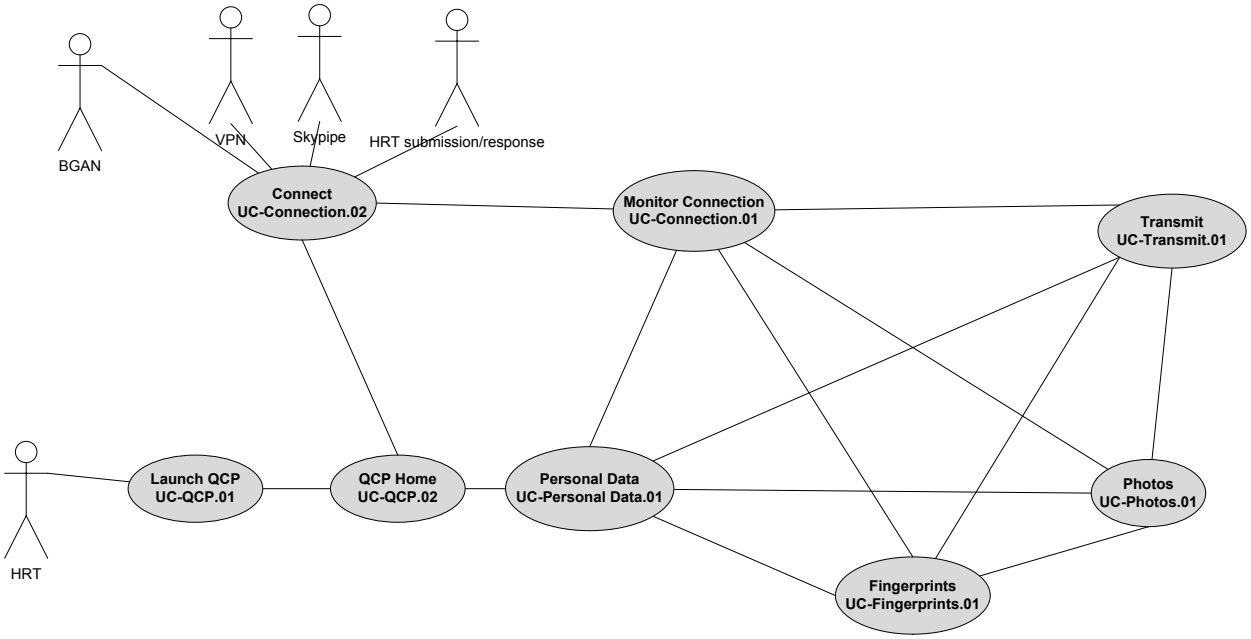

Figure 8 Transmit

3.2.7.1 UC – Transmit.01

UC- Transmit.01	Transmit
Actors	HRT member, BGAN, VPN Client, Skypipe, HRT Submission/Response software
Precondition	QCP application successfully launched and all mandatory information is supplied
Postcondition	Transaction has been provided for submission to databases
Includes	UC – Connection.01
Extends From	
Super Use Case	
Trigger	• User chooses the "Transmit" in Primary scenario, Alternate scenario 1 and Alternate scenario 2 from *UC – Personal Data.01*. –OR– • User chooses the "Transmit" in Primary scenario from *UC – Fingerprints.04*. –OR–

	• User chooses the "Transmit" in Primary scenario from *UC – Fingerprints.05*. –OR– • User chooses the "Transmit" in Primary scenario from *UC – Photos.01*. –OR– • User chooses the "Transmit" in Primary scenario from *UC – Photos.04*. –OR– • User chooses the "Transmit" in Primary scenario from *UC – Photos.05*.
Description	
After all mandatory information (Personal Data, Fingerprints) for a transaction has been supplied, user can transmit the transaction. The QCP application provides the transmitted transaction for submission.	
Process Description	
Primary Process Scenario	**Transmit a Transaction**
Step 1	QCP application: • Saves transaction • Starts transmission
Step 2	QCP application presents to the user: • Indication that the transaction has been transmitted • Data (including personal data, fingerprints, and photos) in non-editable view: o Alternate scenario 3 in UC – Personal Data.01 if "Transmit" is triggered from Personal Data feature o Alternate scenario 1 in UC – Fingerprints.04 if "Transmit" is triggered from Display Fingerprints feature o Alternate scenario in UC – Fingerprints.05 if "Transmit" is triggered from Display Individual Fingerprints feature o Alternate scenario in UC – Photos.04 if "Transmit" is triggered from Display Photos feature o Alternate scenario in UC – Photos.05 if "Transmit" is triggered from Display Individual Photo feature
Exceptions, Error Situations:	NA

Open Issues/Notes

3.2.8 — Use Case – Save Transaction

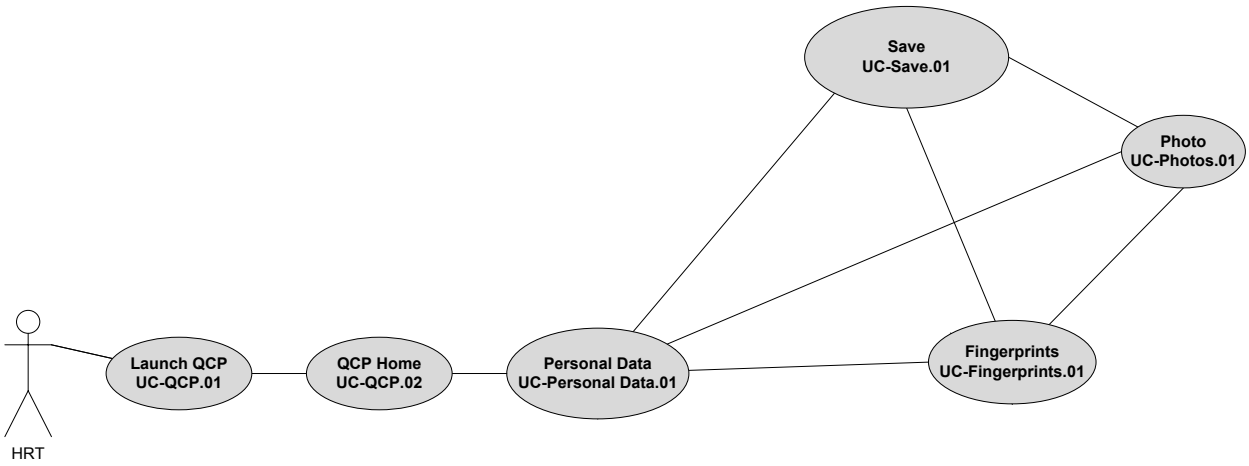

Figure 9 Save Transaction

3.2.8.1 UC- Save.01

UC- Save.01	Save Transaction
Actors	HRT member
Precondition	QCP application successfully launched
Postcondition	Transaction saved to the local storage on the QCP hardware
Includes	
Extends From	
Super Use Case	
Trigger	• User chooses the Save feature in Primary scenario, Alternate scenario 1 and Alternate scenario 2 from *UC – Personal Data.01*. - OR - • User chooses the Save feature in Primary scenario from *UC – Fingerprints.04*. - OR - • User chooses the Save feature in Primary scenario from *UC – Fingerprints.05*. - OR - • User chooses the Save feature in Primary scenario from *UC – Photos.01*. –OR– • User chooses the "Transmit" in Primary scenario from *UC –*

	Photos.04. –OR– • User chooses the "Transmit" in Primary scenario from *UC – Photos.05*.
Description	
While entering, modifying, or updating information of a transaction, the user can save the current information of the transaction.	
Process Description	
Primary Process Scenario	**Save current transaction**
Step 1	QCP application presents to user: • Indication of the activation of the save feature • Indication of the saving progress
Exceptions, Error Situations:	• Error: QCP fails to save transaction: o QCP shall presents to the user an error message indicating the error type, cause of error, and suggestion for recovery
Alternate Scenario Exceptions:	NA
Open Issues/Notes	

3.2.9 — Use Case – Training Mode

3.2.9.1 UC – Training.01

UC- Training.01	Training Mode
Actors	HRT member
Precondition	QCP application successfully launched
Postcondition	QCP application is successfully placed in or out of training mode.
Includes	
Extends From	
Super Use Case	
Trigger	User decides to change the QCP application's training mode.
Description	
The training mode provides the same functionality as in the operational mode. There are two exceptions: (1) transactions created in training mode will be stored separately from the transactions created in operational mode; (2) transactions will be submitted to a training database, such as IAFIS Debug. The training transactions can only be accessed while QCP application is in training mode.	
Process Description	
Primary Process Scenario	**Training Mode**
Step 1	QCP application presents to the user: • Indication of training mode status ○ As long as the training mode is active, an indication will be presented throughout the QCP application
Step 2	*UC – QCP.02* (QCP Home)
Exceptions, Error Situations:	NA
Open Issues/Notes	

APPENDIX A – PERSONAL DATA FIELD ELEMENTS

Appendix A is intended to provide more detailed requirements regarding personal data fields.

Order	Field Name	Field Type	Field Format	Values	Predicative Text Entry
1	Deceased	Selection	n/a	Yes No (default)	n/a
2	First Name	Text	Alphabetic (max. ??)	n/a	Yes
3	Middle Name	Text	Alphabetic (max. ??)	n/a	Yes
4	Last Name	Text	Alphabetic (max. ??)	n/a	Yes
5	Other Middle/Last	Text	Alphabetic (max. ??)	n/a	Yes
6	Alias	Text	Alphabetic (max. ??)	Multiple	Yes
7	Hair	Selection	Alphabetic	Black (default) ???	n/a
8	Gender	Selection	Alphabetic	Male (default) Female Unknown	n/a
9	Date of Birth	Date	yyyymmdd	Multiple	n/a
10	Place of Birth	Selection	Alphabetic	XX – Unknown (default) ???	n/a
11	Race	Selection	Alphabetic	Unknown (default) Asian Black Native American Caucasian Latino	n/a
12	Eyes	Selection	Alphabetic	Brown (default) ???	n/a
13	Height- feet	Selection	Numeric	0 (default)	n/a
14	Height- inches	Selection	Numeric	00 (default)	n/a
15	Weight	Text	Numeric	000	Yes
16	Save Info	Selection	Alphabetic	Yes No (default)	n/a
17	City/Province	Text	Alphanumeric	n/a	Yes
18	State/Country	Text	Alphanumeric	n/a	Yes
19	Remarks	Text	Alphanumeric	n/a	n/a
20	Agency	Text	Alphanumeric	n/a	Yes
21	Division	Text	Alphanumeric	n/a	Yes
22	Credential #	Text	Alphanumeric	n/a	Yes
23	Date of Contact	Date	yyyymmdd	Current date (default)	n/a
24	Type of Search Request	Selection	Alphabetic	Confidential Search (default)	n/a

APPENDIX B – ATTRIBUTES IN TRANSACTION HISTORY AND SUBMISSIONS

Appendix B is intended to provide more detailed requirements regarding transaction attributes in the Transaction History and Submissions. The current system used by the HRT has separate areas for History and Submissions. This design consolidates these two areas into one. The following table provides a tracing of attributes to their origins.

Attribute Name	Default Display	Attribute Type	Display Size	Possible Values	Origin
TCN	Yes			n/a	History Submissions
Responses	Yes			n/a	Submissions
Status	Yes			Saved Transmitted Submitted Responded (Hit or Rejected)	(new requirement)
Last Name	Yes			n/a	History Submissions
First Name	Yes			n/a	History Submissions
Middle Name	Yes			n/a	History Submissions
Date of Birth	Yes	Date		n/a	History
Primary TCN					History
Date Transmitted (Date Submitted)					Submissions
TOT					Submissions
TOT Description					Submissions
Received Hit					Submissions
Control ID (Transmission ID)					History Submissions
TCR Number					History Submissions
Description					History Submissions

Originating Agency ID					History Submissions
Date Created					History
Created By					History
Date Modified					History
Fingers Complete					History
Image(s) Complete					History
Card(s) Printed					History
Record(s) Sent					History
Incomplete					History
Locked					History
Filename					History
Copies 1					History
Copies 2					History
Copies 3					History
Copies 4					History
Copies 5					History
Copies 6					History
Copies 7					History
Copies 8					History
Copies 9					History
Copies 10					History
Has Been					History

Unlocked					
Transaction type					History
WorkSpaceID					History
Cards					History
Hands Complete					History
User 1					History
User 2					History
User 3					History
User 4					History
User 5					History
User 6					History
User 7					History
User 8					History
User 9					History
User 10					History
No					Submissions
Date Received					Submissions
State					Submissions
Direct mail					Submissions
History Fky					Submissions
Group					Submissions
Name Group					Submissions

APPENDIX C – SEARCH CRITERIA IN TRANSACTION HISTORY AND SUBMISSIONS

Appendix C lists search criteria that can be applied to attributes in the Transaction History and Submissions.

Search Field Name	Field Type	Field Format	Values
TCN	Text	Alphanumeric	n/a
Last Name	Text	Alphabetic	n/a
First Name	Text	Alphabetic	n/a
Middle Name	Text	Alphabetic	n/a
Date of Birth	Date Range	yyyymmdd	n/a
Response Count	Selection	Numerical	0 1 2 3
Status	Selection	Alphabetic	Saved Transmitted Pending Responded – All Responded – Hit Responded – Rejected
Date Submitted	Date Range	yyyymmdd	From: n/a To: current date

APPENDIX D – FEATURES AVAILABILITY AND ASSOCIATED FUNCTIONAL AREAS

Functional Area	Conditions	Features Available

Personal Data	Editable	• Edit
		  ○ Cut
		  ○ Copy
		  ○ Paste
		• New
		  ○ Slaps
		  ○ Query
		  ○ Rolls
		• Open
		• Save As
		• Help

Personal Data	View Only	• Open • Help

Fingerprints	Editable	• New
		  ○ Slaps
		  ○ Query
		  ○ Rolls
		• Open
		• Save As
		• Help

Fingerprints	View Only	• Open • Help

Photos	Editable	• New
		  ○ Slaps
		  ○ Query
		  ○ Rolls
		• Open
		• Save As
		• Import …
		• Help

Photos	View Only	• Open • Help
RAP sheets	View Only	• Copy • Open • Help

Transaction History and Submissions	Listing	• Import …
		• Layout
		  ○ Load Layout …
		  ○ Edit Layout …
		  ○ Save Layout As …
		  ○ Set to Default Layout
		• Print
		  ○ Print Setup
		  ○ Print Preview
		  ○ Print …
		• Help