NISTIR 7644

Quick Capture Platform Use Cases User Interaction Specifications

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U.S. Department of Commerce *Gary Locke, Secretary*

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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

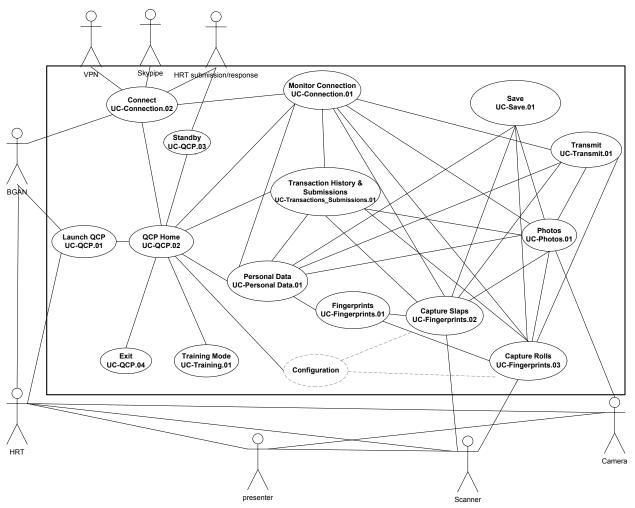


Figure 1 Top Level Use Cases

2.2 — SYSTEM COMPONENTS

The key functional components that will comprise QCP include:

- QCP Application
- Network connection/monitoring

- Create Slaps Transaction
 - o Personal Data
 - o Fingerprints
 - o Photos
- Create Query Transaction
 - o Personal Data
 - o Fingerprints
 - o Photos
- Create Rolls Transaction
 - o Personal Data
 - o Fingerprints
 - o 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 OCP application
- Interaction with other actors:
 - o BGAN
 - VPN client software

- Skypipe software
- o HRT Submission/Response software
- o Fingerprint scanner
- o Biometric presenter (Subject)
- o 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:
 - o Fingerprint capture process
 - Annotation
 - o Exit QCP application with unsaved data
 - o Leaving a transaction with unsaved data
- There will be a method to configure:
 - o Fingerprint capture sequence
 - o Default VPN user name and password
 - o 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:

- o Signal Strength, e.g. decibel reading
- o Connectivity sensing, e.g. cable and network
- o 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

		ex of runy 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
1.0	UC – Connection. 02	Connect	19
1.0	UC – Personal Data.01	Personal Data	21
1.0	UC – Fingerprints.01	Fingerprints	26
1.0	UC – Fingerprints.02	Capture Slaps	27
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1.0	UC – Fingerprints.06	Annotate Prints – User Initiated	40
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1.0	UC – Fingerprints.08	Modify/Remove Annotation	43
1.0	UC – Photos.01	Photos	45
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		Camera	
1.0	UC – Photos.03	Import Photos	48
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1.0	UC – Photos.06	Delete Photos	54
1.0	UC –	Display Transaction History and Submissions	56
	Transactions_Submissions.01		
1.0	UC – Transaction.01	View Transaction Responses	60
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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

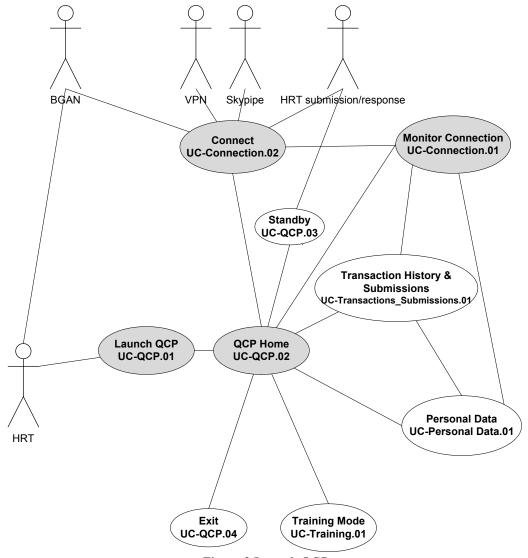


Figure 2 Launch QCP

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 f	unctional areas.
Process Description	
Primary Process	Launch QCP Application
Scenario	
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
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 functional areas.	QCP home with connection status and options to access various
Process Description	
Primary Process Scenario	QCP Home
Step 1	QCP application presents to the user:
	• Connection status (Primary Scenario in <i>UC – Connection.01</i>)
	 Options to Connect (available conditionally, see Exception) Create New Slaps Transaction Create New Rolls Transaction
	 Create Query Transaction Access Transaction History and Submissions
	 Enable or Disable Training Mode Place QCP Application in or out of Standby mode 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: Connection status is active OR- 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):

0	Connect
0	New Slaps Transaction
0	New Rolls Transaction
0	Query Transaction
0	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	Place QCP Application in Standby mode
Scenario	
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 <i>UC – QCP.01</i>
	-OR-
	• Click the close window icon "x" in the application window
Description	
The user decides to end Q	CP application. The application shuts down all communications.
Process Description	
Primary Process	Exit QCP Application
Primary Process Scenario	
	QCP application presents to the user:
Scenario	QCP application presents to the user: • A request to confirm exit, indicating:
Scenario	QCP application presents to the user: • A request to confirm exit, indicating: • Consequences of exit
Scenario	QCP application presents to the user: • A request to confirm exit, indicating: • Consequences of exit • The following processes will be ended:
Scenario	QCP application presents to the user: • A request to confirm exit, indicating: • Consequences of exit • The following processes will be ended: • Network communication from the BGAN
Scenario	QCP application presents to the user: • A request to confirm exit, indicating: • Consequences of exit • The following processes will be ended: • Network communication from the BGAN • VPN connection
Scenario	QCP application presents to the user: • A request to confirm exit, indicating: • Consequences of exit • The following processes will be ended: • Network communication from the BGAN • VPN connection • Skypipe processing
Scenario Step 1	QCP application presents to the user: • A request to confirm exit, indicating: • Consequences of exit • The following processes will be ended: • Network communication from the BGAN • VPN connection • Skypipe processing • HRT Submission/Response software
Step 1 Step 2	QCP application presents to the user: • A request to confirm exit, indicating: • Consequences of exit • The following processes will be ended: • Network communication from the BGAN • VPN connection • Skypipe processing • HRT Submission/Response software User confirms the exit action.
Scenario Step 1	QCP application presents to the user: • A request to confirm exit, indicating: • Consequences of exit • The following processes will be ended: • Network communication from the BGAN • VPN connection • Skypipe processing • HRT Submission/Response software

	 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.
Everytions Every	T 1: 1: 1:000p 1: /:
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	Exit QCP application via close window icon "x"
Scenario 1	
Scenario 1 Step 1	User clicks the close window icon "x" in the application window.
	User clicks the close window icon "x" in the application window. QCP application presents to the user:
Step 1	QCP application presents to the user: • A request to confirm exit, indicating:
Step 1	 QCP application presents to the user: A request to confirm exit, indicating: Consequences of exit
Step 1	QCP application presents to the user: • A request to confirm exit, indicating:
Step 1	QCP application presents to the user: • A request to confirm exit, indicating: • Consequences of exit • Any unsaved data will be lost
Step 1	 QCP application presents to the user: A request to confirm exit, indicating: Consequences of exit
Step 1	 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:
Step 1	 QCP application presents to the user: A request to confirm exit, indicating:
Step 1	 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
Step 1	 QCP application presents to the user: A request to confirm exit, indicating:
Step 1 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 1 Step 2 Step 3	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

3.2.2 — Use Case – Connection

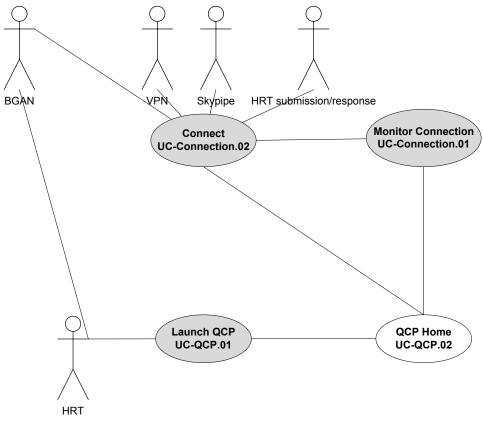


Figure 3 Connection

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.

an connection compone	ents.
Process Description	n
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: 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 Skypipe status Skypipe status HRT submission/response software status Skypipe status HRT submission/response software status Skypipe status HRT submission/response software status Response alert notice, if there is a response: The alert notice shall acquire window focus, i.e. shall not be hidden behind any windows For "Hit" responses: Presents to user options to View RAP sheet (UC – Transaction.04) Close the alert notice (which shall not re-appear) 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

Step 3	 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 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 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

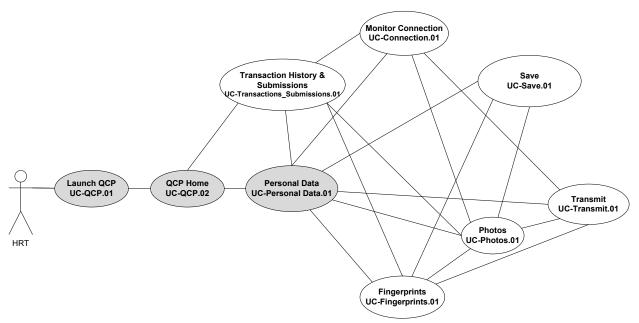


Figure 4 Personal Data

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	

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.

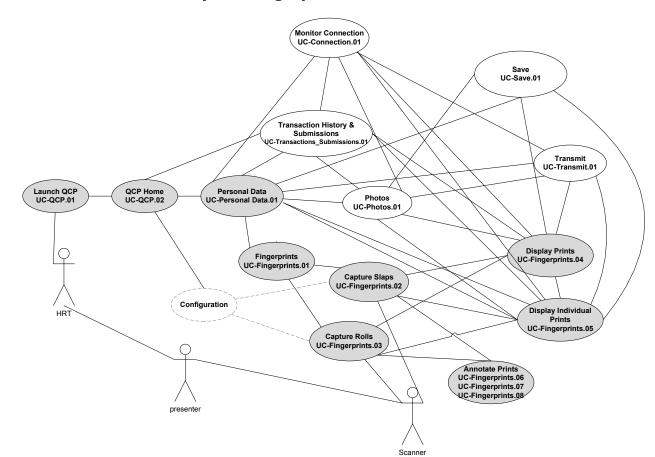
Process Description	
Primary Process	Personal Data Entry for a New Transaction
Scenario	

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)
	 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:
	 Mandatory fields
	 Expected field formats
	 Field length limits
	 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:
	A default value from the options Method(s) to choose among the options
	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) • Photos feature (Primary scenario UC – Photos.01 if no
	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:
	OUC – QCP.02 (QCP Home)
	UC – Transactions_Submissions.01 (Transaction Uistary and Submissions)
	History and Submissions)
	 UC – Transmit.01 (conditional, see Exception) UC – Save. 01 (conditional, see Exception)
Sten 2	User fills in an entry field.
Step 2	Oser mis in an entry meid.

Step 3	QCP application presents to the user:
	Indication of mandatory fields completion status For a subset of tout out my fields (see Anney div. 1): The complete of tout out my fields (see Anney div. 1):
	• For a subset of text entry fields (see <i>Appendix A</i>):
	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.
Отор ч	There shall be a method to sequentially navigate among the
	entry fields, following the order presented in <i>Appendix A</i> .
	entry fields, following the order presented in Appendix 11.
Exceptions, Error	Exception: "Transmit" will only be available -
Situations:	o when all mandatory data (including personal data, and
	fingerprints) are completed
	 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	Personal Data Entry of Deceased Presenter for a New
Scenario 1	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"
01 0	• First Name: "X"
Step 3	Same as Steps 2-4 as in primary scenario.

_	
Alternate Scenario	Same as in primary scenario.
Exceptions:	• 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 <i>UC – Personal Data.01</i> .
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)
	 Enter personal data for living presenter
	 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:
	 Mandatory fields
	 Expected field formats
	 Field length limits
	 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:
	A default value from the options
	 Method(s) to choose among the options
	• Options to access:
	 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:
	○ UC – QCP.02 (QCP Home)
	 UC – Transactions_Submissions.01 (Transaction

	History and Submissions)
	 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 (<i>see Appendix A</i> for a list of fields) filled with values
	 Options to access: Fingerprints feature (Alternate scenario 1 in UC – Fingerprints.04) Photos feature (Alternate scenario in UC – Photos.04) View RAP sheet for a "Hit" response (Alternate scenario 2 UC – Transaction.04)
	 Options to access: UC – QCP.02 (QCP Home) UC – Transactions_Submissions.01 (Transaction History and Submissions)
	• Option to Update the transaction (<i>UC – Transaction.03</i>)
Alternate Scenario	Same as in primary 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 pr	rovides access to fingerprint capturing process or to the display of	
fingerprints.		
Process Description	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 QCP application indicates the disconnection of the scanner and prompts the user to connect the scanner The options to capture slaps or rolls are inactive 	
	 Error: scanner fails QCP application indicates the failure of the scanner 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** Initial fingerprint capture Scenario 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 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 Repeat steps 1 to 3 until: Step 5 • All print images are captured or annotated -OR-• User determines fingerprint capture process completion -OR-• User cancels fingerprint capture process. QCP application

be saved

o a request to confirm cancellation indicating prints and annotations from the current capture process will not

presents to the user:

	o Alternate scenario 2 in UC – Fingerprints.04, upon
	user confirmation
Step 6	UC – Fingerprints.04 (Display Fingerprints)
F C F	
Exceptions, Error Situations:	• Exception: a print image is rejected, QCP application displays to
Situations.	the user:
	the reason for rejectionoption to retake or accept the print image
	• Exception: a print is missing, QCP application prompts user to annotate (<i>UC – Fingerprints.07</i>).
	Error: scanner fails
	 QCP application indicates the failure of the scanner
	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:
	 Selected prints that have existing print images will be marked as uncaptured.
	 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:
	 Annotate any prints (UC – Fingerprints.06)
	o Modify/Remove annotations (UC – Fingerprints.08)

	 Options to: Determine fingerprint capture process completion Cancel fingerprint capture process
Step 3	For the current expected print:
	 If the capture status is uncaptured: Same as in steps 2 to 3 in primary scenario for capturing the print. -OR- User may decide to annotate (UC – Fingerprints.06).
	 If the capture status is annotated: 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: • a request to confirm cancellation indicating prints and annotations from the current capture process will not be saved • Alternate scenario 2 in UC – Fingerprints.04, upon user confirmation.
Step 6	Modification results will be reflected in <i>UC – Fingerprints.04</i> (display fingerprints).
	(msp.m) angulation
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

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: Annotate any prints (UC – Fingerprints.06) Modify annotations (UC – Fingerprints.08) Options to: Determine fingerprint capture process completion Cancel fingerprint capture process
Step 2	 Presenter places requested print on scanner platen QCP application displays to the user: print image from scanner 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: 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

	On
	-OR-
	User determines fingerprint capture process completion
	OR— Ligar concells fingermaint conture process OCR application
	• 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:
	 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
	 QCP application indicates the failure of the scanner
	 The options to capture slaps or rolls are inactive
Alternate Process	Fingerprint modification
Scenario	
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:
	 Selected prints that have existing print images will be marked as uncaptured.
	 Selected prints that have existing annotations will
	retain the annotations and be marked as annotated.
Step 2	QCP application presents to the user:
Otop 2	• 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
	• The capture status of any print (captured, uncaptured, or

	annotated)
	• Options to:
	 Annotate any prints (UC – Fingerprints.06) Modify/Remove annotations (UC – Fingerprints.08)
	• Options to:
	 Determine fingerprint capture process completion Cancel fingerprint capture process
Step 3	For the current expected print:
	 If the capture status is uncaptured: Same as in steps 2 to 3 in primary scenario for capturing the print. -OR- User may decide to annotate (UC – Fingerprints.06).
	 If the capture status is annotated: 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:
	 a request to confirm cancellation indicating prints and annotations from the current capture process will not be saved Alternate scenario 2 in UC – Fingerprints.04, upon user confirmation.
Step 6	Modification results will be reflected in <i>UC – Fingerprints.04</i> (display fingerprints).
Alternate Scenario Exceptions:	Same as in primary scenario.
Open Issues/Notes	
	cenario, the exchange of data between the scanner and QCP application ument. 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).
B 1 41	

Description

The application displays print blocks containing captured print images or annotations with associated names.

Process Description	ı
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: • Right thumb • Right index • Right middle • Right ring • Right little • Left thumb • Left index • Left middle
	 Left ring Left little For slap images or annotations (complete annotation, not just the annotation code) with associated names: Right slap Right slap thumb Left slap Left slap thumb Options to: View enlarged individual print images or annotations

	(complete annotation , not just the annotation code) with associated names (UC − Fingerprints.05) Modify print(s) All prints OR− Select print(s), i.e. print images or annotated prints, to modify
	 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) Photos feature (Primary scenario UC – Photos.01 if no photos exist, or Alternate scenario in UC – Photos.01 if photos 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	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 - when all mandatory data (including personal data, and fingerprints) are completed HRT Submission/Response software is available
	Exception: "Save" will only be available - when there are changes made since data was last saved
Alternate Process Scenario 1	View only display of print images for a transmitted transaction

Cton 1	OCD 1' ' ' 1
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
	 Right index
	 Right middle
	 Right ring
	 Right little
	 Left thumb
	 Left index
	 Left middle
	 Left ring
	 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
	 Left slap thumb
	Options to:
	 Options to: 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:
	 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)
	 UC – Transactions Submissions.01 (Transaction
	History and Submissions)
	• Option to Update the transaction (<i>UC – Transaction.03</i>)
	- Option to Option the transaction (OC Transaction.03)
Alternate Scenario	Same as in primary scenario.
Exceptions:	Same as in primary sections.

Alternate Process Scenario 2	Display of print blocks if capture process is cancelled
Step 1	 QCP application presents to the user: Print blocks with: Any fingerprint images or annotations from previously successful capture process, i.e. non-cancelled process (Primary scenario in UC – Fingerprints.04) OR- Empty print blocks, if there are no previously captured prints
	Option to Capture fingerprints
	 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) Photos feature (Primary scenario UC – Photos.01 if no photos exist, or Alternate scenario in UC – Photos.01 if photos 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	 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 - when all mandatory data (including personal data, and fingerprints) are completed HRT Submission/Response software is available Exception: "Save" will only be available - when there are changes made since data was last
Open Issues/Notes	saved

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.

UC – Fingerprints.05 3.2.4.5

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	
	enlarged individual print images or annotations with associated names. ndividual prints is provided.

	marvidua prints is provided.
Process Description	1
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: View the enlarged print image at 100%, 110%, 120%, 130%, 140%, 150%. For views above 100%, there shall be a method to move the print image within the view port Navigate to previous or next enlarged print image or annotated print Navigate back to display all prints (UC – Fingerprints.04) Modify the current print (Alternate scenario in UC –

Fingerprints.02 for slaps or alternate scenario in U Fingerprints.03 for rolls) 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) Photos feature (Primary scenario UC – Photos.01 in photos exist, or Alternate scenario in UC – Photos.	C –
 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) Photos feature (Primary scenario UC – Photos.01 in UC – Phot	
 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) Photos feature (Primary scenario UC – Photos.01 in UC – Phot	
if photos exist)	
Options to access:	
o UC – QCP.02 (QCP Home)	
 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 - • when all mandatory data (including personal data, fingerprints) are completed • HRT Submission/Response software is available	and
Exception: "Save" will only be available -	
o when there are changes made since data was last saved	
o when there are changes made since data was last	
o when there are changes made since data was last	n
o when there are changes made since data was last saved Alternate Process Display of an enlarged print for a transmitted transaction)n
o when there are changes made since data was last saved Alternate Process Scenario Step 1 Display of an enlarged print for a transmitted transaction user selects the option to view an enlarged print image or an	on
O when there are changes made since data was last saved Alternate Process Scenario Step 1 User selects the option to view an enlarged print image or an annotated print	ı or
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 the annotated print (complete annotation, not just the annotation)	ı or
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 the annotated print (complete annotation, not just the annotation) of interest with the associated name	ı or tion
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 the annotated print (complete annotation, not just the annotated print (complete annotation and print image) of interest with the associated name • Options to: • View the enlarged print image at 100%, 110%, 120%	ı or tion

	 annotated print Navigate back to display all prints (Alternate scenario 1 in UC – Fingerprints.04)
	 Options to access: Personal Data feature (Alternate scenario 3 in UC – Personal Data.01) Photos feature (Alternate scenario in UC – Photos.04) View RAP sheet for a "Hit" response (Alternate scenario 2 in UC – Transaction.04)
	 Options to access: UC – QCP.02 (QCP Home) 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 will be skipped from the capture	process, user can choose to annotate any prints. The annotated prints apture 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:
	 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	NA
Situations:	
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
	 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	NA
Exceptions:	
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 user to annotate the missing	process, if QCP application detects any missing prints, it will prompt ag 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: Unable to print 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, indication of annotation for the annotated fingerprints 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 modify or remove the anno	process, for any previously annotated prints, user can choose to otations.	
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:	
	 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: Unable to print 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

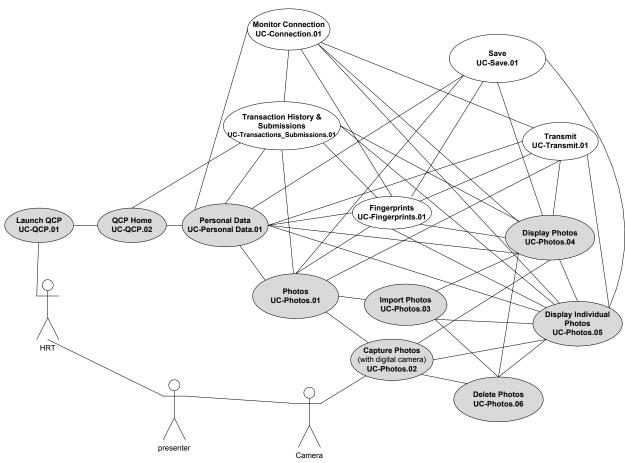


Figure 6 Photos

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.

embedded digital earners of import pictures from mes) of to the display of photos.		
Process Description		
Primary Process	New Photos	
Scenario		
Step 1	QCP application presents to the user:	
	• Options to:	
	 Capture photos with an embedded digital camera (if available) Import photos 	
	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:	
	o 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	• <i>UC – Photos.02</i> if user selects capture photos with camera option in Step 1.	
	• <i>UC – Photos.03</i> if user selects import photos option in Step 1.	
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: "Save" will only be available -	
	 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: Take picture Display or hide (default) an overlay guide for photo taking Delete temporary picture(s) (Primary scenario in UC – Photos.06) 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 • Each picture will be assigned a label by the QCP application	

Step 6	Repeat steps 1 to 5 until user determines photos capture process
	completion.
Step 7	UC – Photos. 04 (Display Photos).
Exceptions, Error	NA
Situations:	
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 photo	s from sources outside of the QCP application.
Process Description	
Primary Process	Import Photos
Scenario	
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	<i>UC – Photos.04</i> (Display Photos).
Exceptions, Error	NA
Situations:	
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:
	 Select photo(s) to delete (Alternate scenario 1 in UC - Photos.06) Change photo names Options to: Capture photos with a embedded digital camera (if available) (UC – Photos.02) Import photos (UC – Photos.03)
	Photos.06) Change photo names Options to: Capture photos with a embedded digital camera available) (UC – Photos.02)

	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 -
Alternate Process	View only display photos for a transmitted transaction
Scenario	OCD II II
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: Personal Data feature (Alternate scenario 3 in UC – Personal Data.01) Fingerprints feature (Alternate scenario 1 in UC – Fingerprints.04) View RAP sheet for a "Hit" response (Alternate scenario 2 UC – Transaction.04)
	 Options to access: UC – QCP.02 (QCP Home) UC – Transactions_Submissions.01 (Transaction History and Submissions)
Stop 2	• Option to Update the transaction (<i>UC - Transaction.03</i>) <i>UC - Photos.05</i> if user chooses to view individual photos.
Step 2	OC – Fnotos.03 ii usei ciiooses to view iiidividuai priotos.
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: • 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) -ORo 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** Exception: if user chooses to delete a photo, QCP application Situations: 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 - 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:
	 Options to access: Personal Data feature (Alternate scenario 3 in UC – Personal Data.01) Fingerprints feature (Alternate scenario 1 in UC – Fingerprints.04) View RAP sheet for a "Hit" response (Alternate scenario 2 in UC – Transaction.04)
	 Options to access: UC – QCP.02 (QCP Home) UC – Transactions_Submissions.01 (Transaction History and Submissions)
Open Issues/Notes	• Option to Update the transaction (<i>UC – Transaction.03</i>)
Open Issues/Notes	

Open issues/Notes

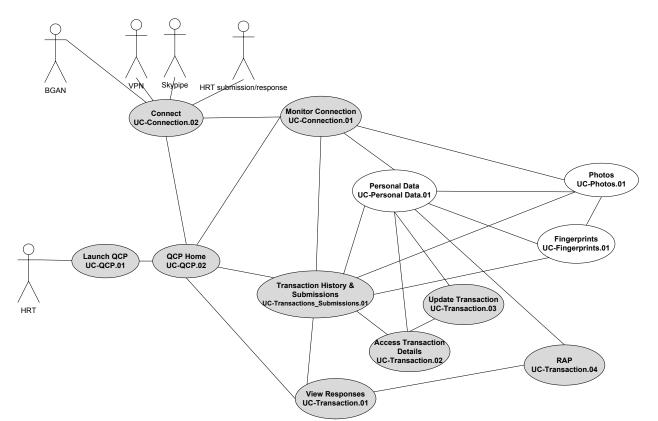
If user accesses other features (e.g. Personal Data, Photos, etc.), then comes back to Fingerprints feature, QCP application shall present the last viewed print.

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 remo	oves photo(s) from the QCP application.		
Process Description	Process Description		
Primary Process	Delete Photo(s) while taking pictures		
Scenario			
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).		
Everytions Every			
Exceptions, Error Situations:	Exception: QCP application shall not request confirmation of deleting temporary pictures.		
Situations.	deleting temporary pictures.		
Alternate Process	Delete Photo(s) in Display Photos area		
Scenario 1	Delete i noto(3) in Display i notos 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 <i>UC – Photos.01</i>)
Open Issues/Notes	
If user accesses other fea	tures (e.g. Personal Data, Photos, etc.), then comes back to Fingerprints

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.

<u>Note</u>: Transactions created in operational mode and training mode will not be displayed concurrently.

Process Description	า
Primary Process	Transaction History and Submissions
Scenario	
Step 1	QCP application presents to the user:
	• All transactions created (see <i>Exception</i>).
	 Each transaction shall have the same set of attributes
	(see Appendix B for a list of attributes)
	 A transaction does not have to have a value for all attributes
	 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 <i>Pending</i> , 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:
	Always display the original transaction submitted
	 Group and display updated transactions with the original transaction, based on the chronological order
	of the updates starting with the oldest
	 Option to display/hide updated transactions
	Options to Determine the presentation order of the dignley.
	 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
	 Resize presentation area for each display attribute

	 There shall be a default presentation area size for each display attribute
	Options to
	 Search the transaction history
	 Import transactions
	○ UC – QCP.02 (QCP Home)
Step 2	QCP application presents to the user for the transaction of interest:Options to
	• View responses to the transaction with a status as
	submitted or responded
	 Access the details of the transaction
Step 3	• UC – Transaction.01 if user selects View transaction responses option in step 2
	• <i>UC – Transaction.02</i> 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: QCP application shall preserve any user selection(s) QCP application shall not change position of the view port.
	• Exception:
	 Transactions created while in training mode shall only appear when QCP application is in training mode. Transactions created while in operational mode shall only appear when QCP application is in operational mode. Given the separation of transactions between the operational and training modes, the delete transaction function will not be necessary.
	 Exception on updated transactions: Sorting will only apply to the original transaction 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)
	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.
	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 (<i>UC – Transactions_Submissions.01</i>).
	Options to
	 Determine the presentation order of the display attributes
	 There shall be a default attribute presentation order
	 Sort display transactions based on any one attribute
	 There shall be a default transaction order
	 Resize presentation area for each display attribute
	 There shall be a default presentation area
	size for each display attribute
	Options to
	Modify search criteria

	○ UC – QCP.02 (QCP Home)
Step 6	Same as steps 2 and 3 in primary scenario.
Alternate Scenario	Same as primary scenario.
Exceptions:	• 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**

responses from the databases.

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	

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: • Null (no response yet) • Hit • Rejected • Date responded • RAP sheet "Viewed" status • Options to • View RAP sheet for a "Hit" response • UC – Transactions_Submissions.01 (Transaction History and Submissions)
Step 2	User selects to view a RAP sheet (Alternate scenario 1 in <i>UC</i> – <i>Transaction.04</i>).
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: • Transaction identifier, e.g. TCN • Type of transaction • 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	Untransmitted Transaction Details
Scenario	
Step 1	 QCP application presents to the user: Metadata: Transaction identifier, e.g. TCN Type of transaction Transaction status:
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

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 Step 1 QCP presents to user: Options to Update Record Roll Prints Step 2 QCP application generates: Metadata: A new TCN 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 "roll will be preserved. Photos, if any, will be preserved.
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 Step 1 QCP presents to user: Options to Update Record Roll Prints Step 2 QCP application generates: Metadata: A new TCN 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 "roll will be preserved.
Primary Process Scenario Step 1 QCP presents to user: Options to Roll Prints Step 2 QCP application generates: Metadata: A new TCN 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 "roll will be preserved.
Scenario Step 1 QCP presents to user: Options to Update Record Roll Prints Step 2 QCP application generates: Metadata: A new TCN 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 "roll will be preserved.
 Options to Update Record Roll Prints Step 2 QCP application generates: Metadata: A new TCN Type of transaction (CNA) Step 3 If user chooses Update Record option in step 1:
 Metadata: A new TCN 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 "roll will be preserved.
 Alternate scenario 2 in UC – Personal Data.01. Fingerprint images, annotations, and print type "slaps" or "roll 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 NA Situations:
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 disp	lays 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: Navigate to other available RAP sheets for the transaction 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: Personal Data feature Fingerprints feature Photos feature Options to Update the transaction (UC – Transaction.03). Go to QCP home (UC – QCP.02) 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

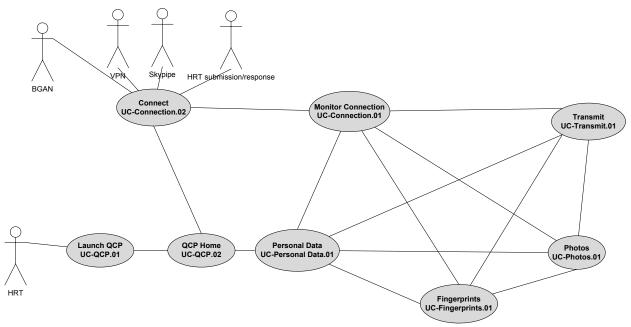


Figure 8 Transmit

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 <i>UC</i> –
Fingerprints.05.
-OR-
• User chooses the "Transmit" in Primary scenario from <i>UC</i> –
Photos.01.
-OR-
• User chooses the "Transmit" in Primary scenario from <i>UC</i> –
Photos.04.
-OR-
• User chooses the "Transmit" in Primary scenario from <i>UC</i> –
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	1
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:
	 Alternate scenario 3 in UC – Personal Data.01 if "Transmit" is triggered from Personal Data feature Alternate scenario 1 in UC – Fingerprints.04 if "Transmit" is triggered from Display Fingerprints feature Alternate scenario in UC – Fingerprints.05 if "Transmit" is triggered from Display Individual Fingerprints feature Alternate scenario in UC – Photos.04 if "Transmit" is triggered from Display Photos feature 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

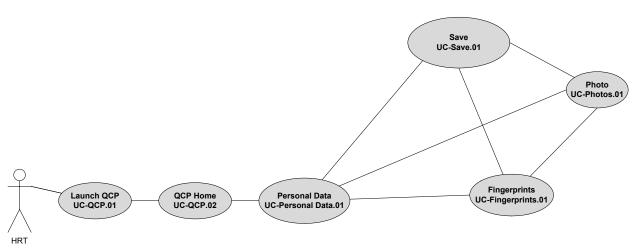


Figure 9 Save Transaction

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 <i>UC</i> –					
	Photos.05.					
Description						
While entering, modifying	g, or updating information of a transaction, the user can save the					
current information of the	transaction.					
Process Description						
Primary Process	Save current transaction					
Scenario						
Step 1	QCP application presents to user:					
	 Indication of the activation of the save feature 					
	 Indication of the saving progress 					
Exceptions, Error	• Error: QCP fails to save transaction:					
Situations:	o QCP shall presents to the user an error message					
	indicating the error type, cause of error, and					
	suggestion for recovery					
	1 30					
Alternate Scenario	NA					
Exceptions:						
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	n/a
				No (default)	
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) TCR Number					History Submissions History
Description					Submissions History Submissions

Originating	History
Agency ID	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		Fea	tures Available
Personal Data	Editable	•	Edit	
			0	Cut
			0	Copy
			0	Paste
		•	New	
			0	Slaps
			0	Query
			0	Rolls
		•	Open	
		•	Save As	
		•	Help	
Personal Data	View Only	•	Open	
		•	Help	
Fingerprints	Editable	•	New	
			0	Slaps
			0	Query
			0	Rolls
		•	Open	
		•	Save As	
		•	Help	
Fingerprints	View Only	•	Open	
		•	Help	
Photos	Editable	•	New	
			0	Slaps
			0	Query
			0	Rolls
		•	Open	
		•	Save As	
		•	Import	
		•	Help	
Photos	View Only	•	Open	
		•	Help	
RAP sheets	View Only	•	Copy	
		•	Open	
		•	Help	

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