

Daniel **Fitzmaurice**

43961229

Wei Qing **Chin**

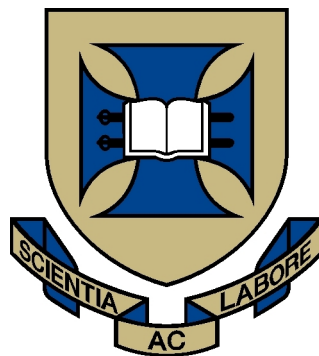
44565594

Cieran **Kent**

43912445

Mark **Belonogoff**

42345390



University of Queensland

CSSE3002 – The Software Process

Requirements Specification

Table of Contents

1	Introduction	1
2	Use Case Packages	2
2.1	Package Diagram	2
2.2	Package Descriptions	2
3	Use Case Diagrams	3
3.1	Processing	3
3.2	External Verification	4
3.3	System Configuration	5
3.4	Registration	6
3.5	Access Control	7
3.6	Data Gathering	7
3.7	Approval	8
4	Actor Descriptions	9
5	Use Case Summaries	10
5.1	External Verification	10
5.2	External Verification	10
5.3	System Configuration	10
5.4	Registration	10
5.5	Access Control	10
5.6	Data Gathering	11
5.7	Approval	11
6	Use Case Descriptions	12
6.1	Visa Acceptance	12
	Typical Sequence of Events	12
	Alternative Sequences of Events	12
6.2	Re-assign to Group	12
	Typical Sequence of Events	13
	Alternative Sequence of Events	13
6.3	Send portion to external verifier	13
	Typical Sequence of Events	13
6.4	View referred application	14
	Typical Sequence of Events	14
	Alternative Sequences of Events	14
6.5	Comment on referred application	14
	Typical Sequences of Events	15
	Alternative Sequences of Events	15
6.6	Return referred application that cannot be verified	15
	Typical Sequence of Events	16
	Alternative Sequences of Events	16
6.7	Return referred application that has been verified	16
	Typical Sequence of Events	17
	Alternative Sequences of Events	17
6.8	View current system configuration	17
	Typical Sequence of Events	18
	Alternative Sequences of Events	18

6.9	Update policy rules	18
	Typical Sequence of Events	18
	Alternative Sequences of Events	19
6.10	Registration – View Guideline	19
	Typical Sequence of Events	19
6.11	Registration – Visa Registration	19
	Typical Sequence of Events	20
	Alternative Sequences of Events	20
6.12	Registration – Update Application	20
	Typical Sequence of Events	20
	Alternative Sequences of Events	21
6.13	Registration – View Visa Status	21
	Typical Sequence of Events	21
	Alternative Sequences of Events	22
6.14	Registration – Appeal Application	22
	Typical Sequence of Events	22
	Alternative Sequences of Events	22
6.15	Registration – Edit Update Recieving Methods	23
	Typical Sequence of Events	23
	Alternative Sequences of Events	23
6.16	Create Visa Processor Accounts	23
	Typical Sequence of Events	24
	Alternative Sequences of Events	24
6.17	Remove Visa Processor Accounts	24
	Typical Sequence of Events	24
	Alternative Sequences of Events	25
6.18	Edit Visa Processor Accounts	25
	Typical Sequence of Events	25
	Alternative Sequences of Events	26

Introduction

This document provides the requirement specification for an eVisa processing system. This is designed to streamline the application and approval process for foreign citizens seeking to enter Australia.

Use Case Packages

Package Diagram

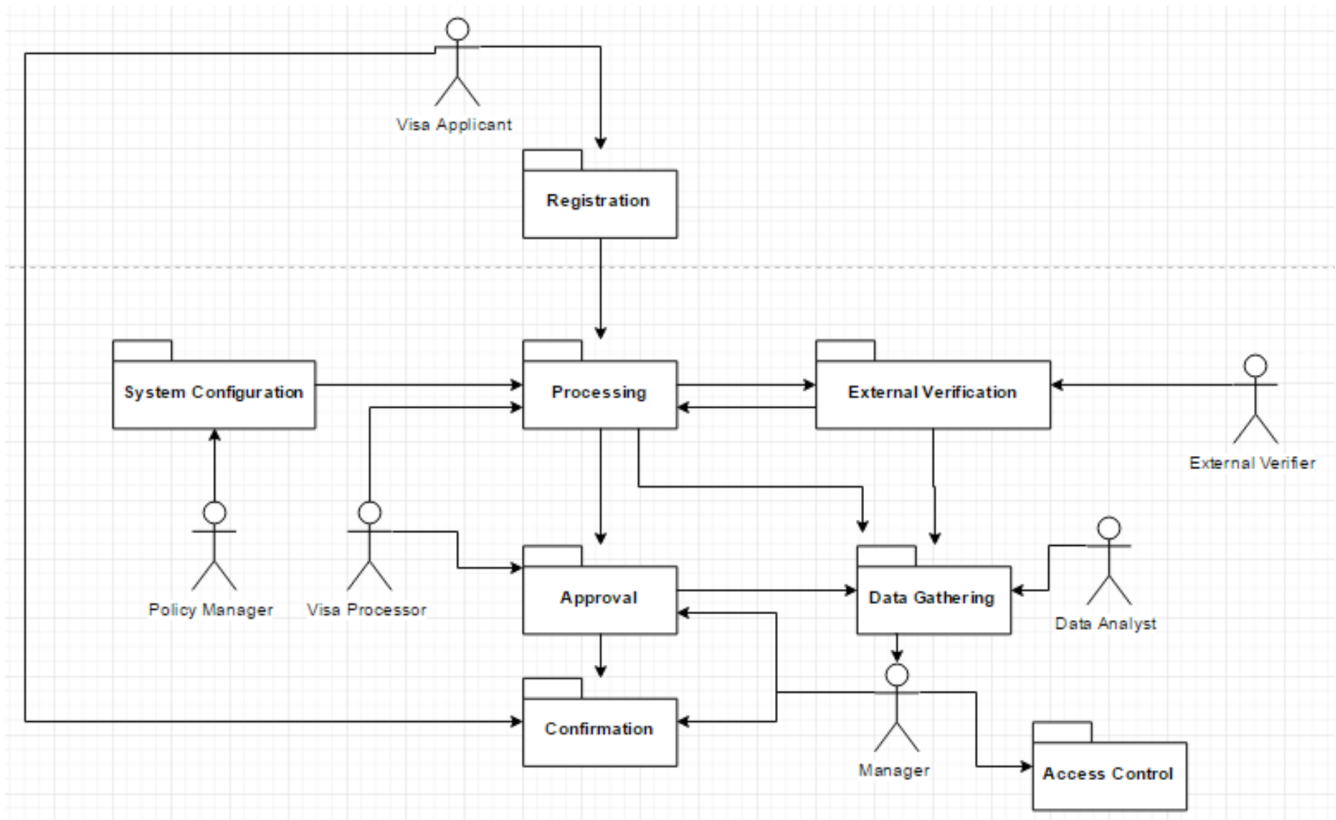


Figure 1: Package Diagram

Package Descriptions

Package Name	Description
Access Control	Create and manage users and assign access privileges
Registration	Give personal information to begin application
Approval	The decision of whether or not to grant a visa is made
Confirmation	The applicant is notified whether or not their application was successful
Data Gathering	View statistics on the behaviour of employees. Allows for more complex data operations
External Verification	External verifiers may make comments on an application
System Configuration	Policy rules are updated (e.g. updating a black list etc)

Use Case Diagrams

Processing

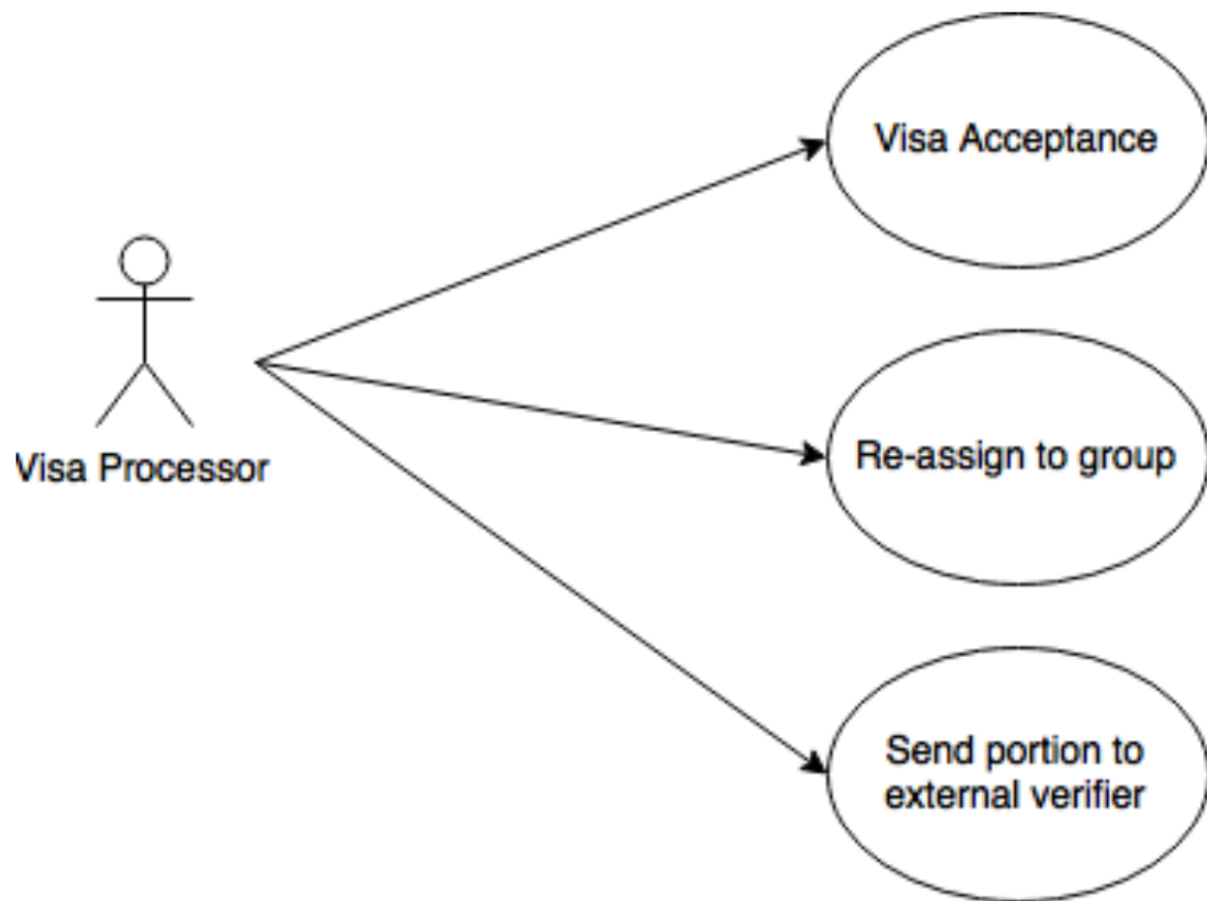


Figure 2: Processing

External Verification

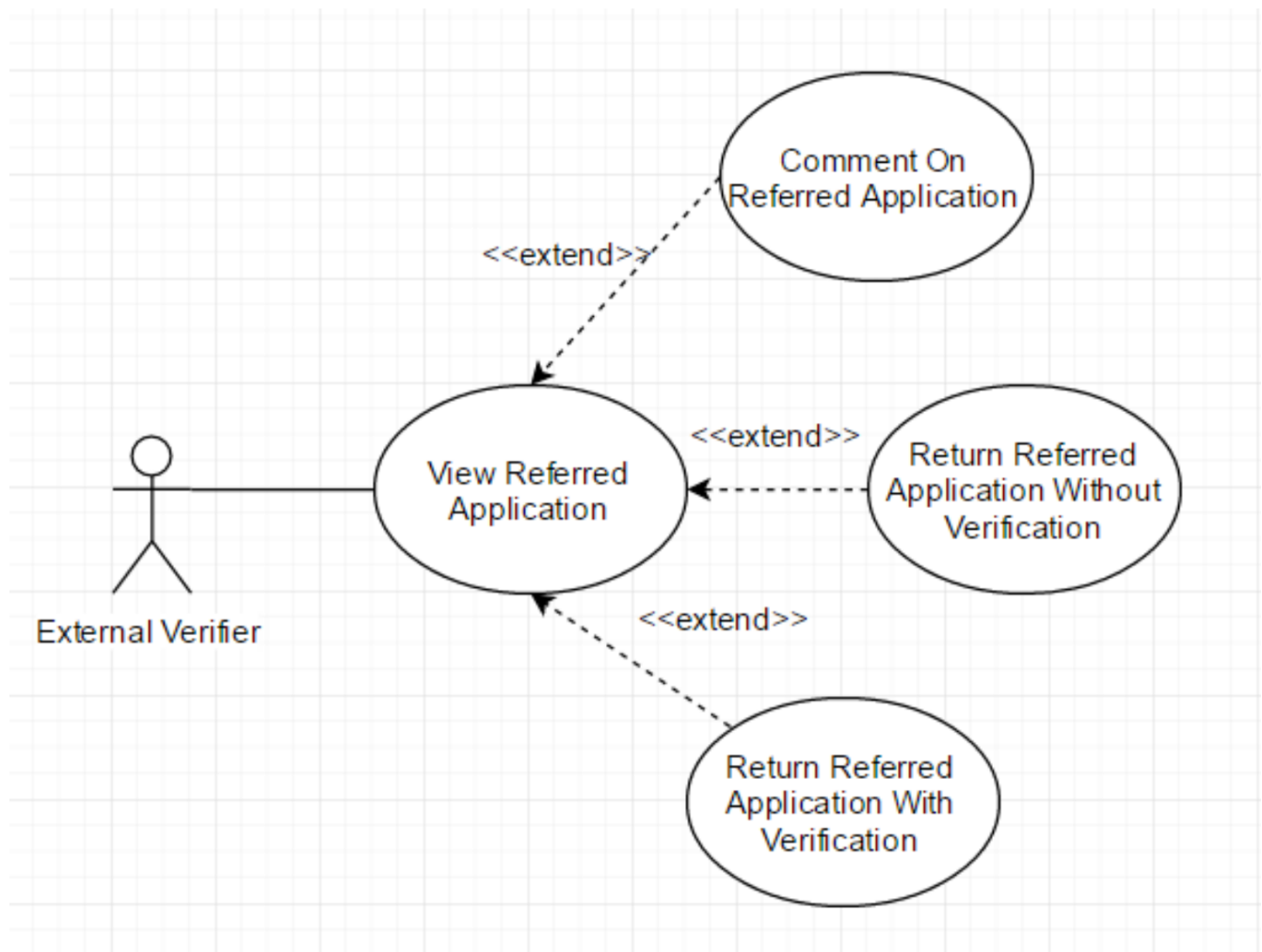


Figure 3: External Verification

System Configuration

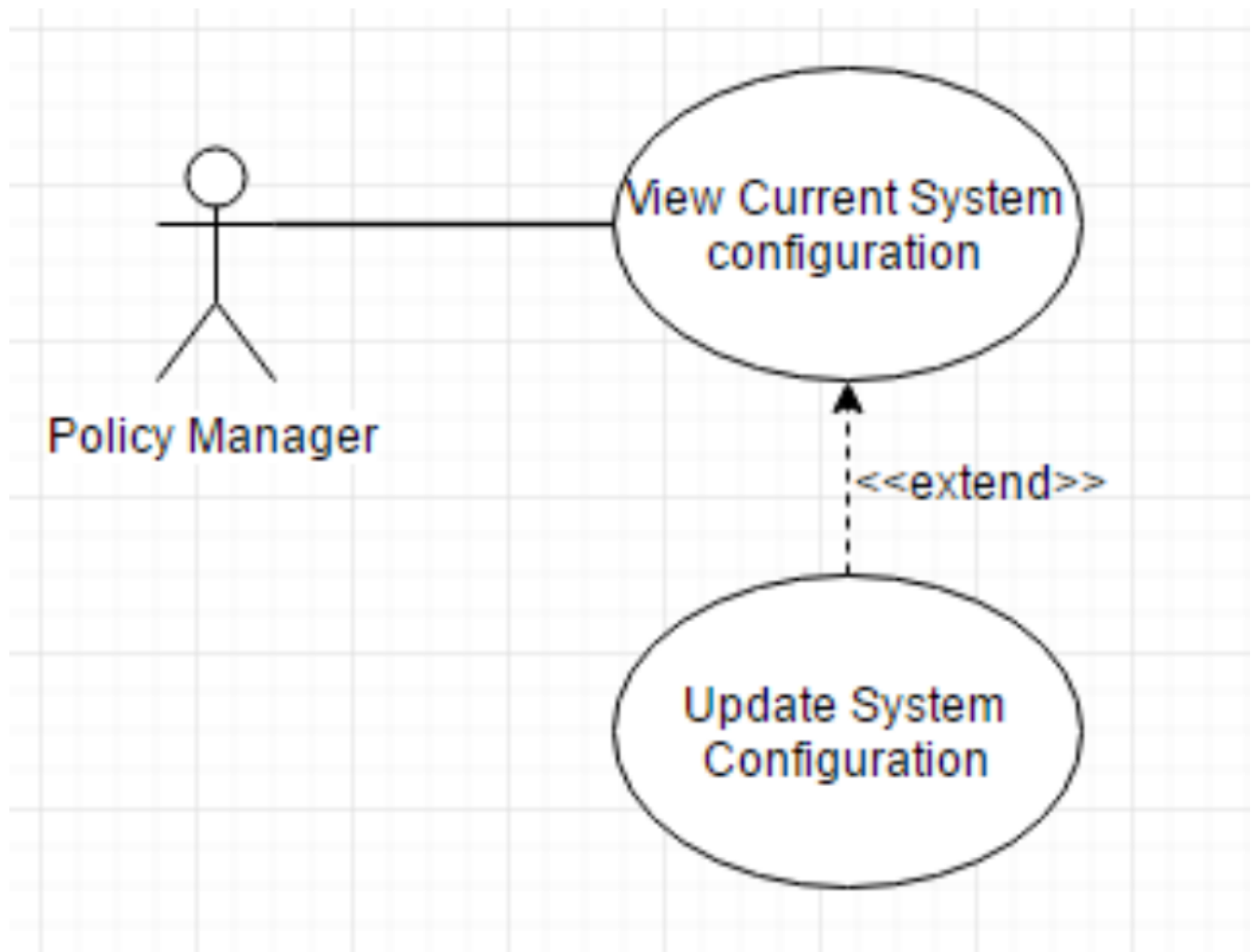


Figure 4: System Configuration

Registration

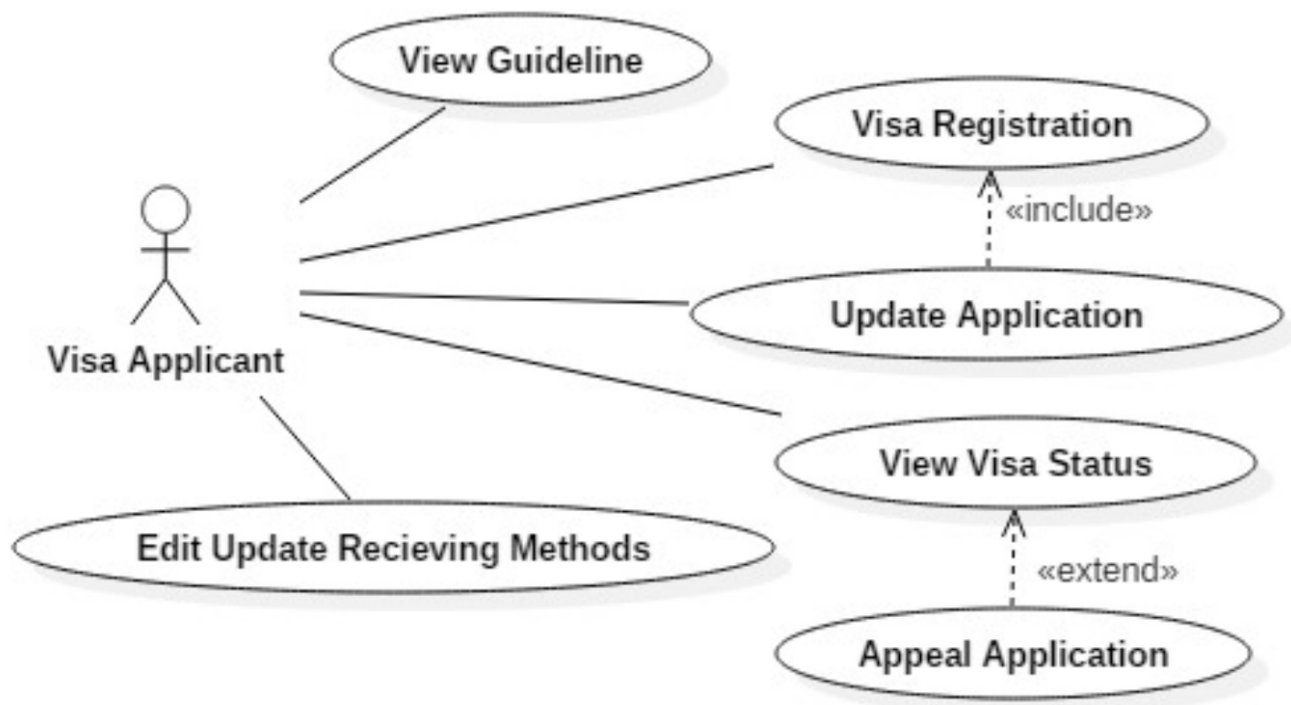


Figure 5: Registration

Access Control

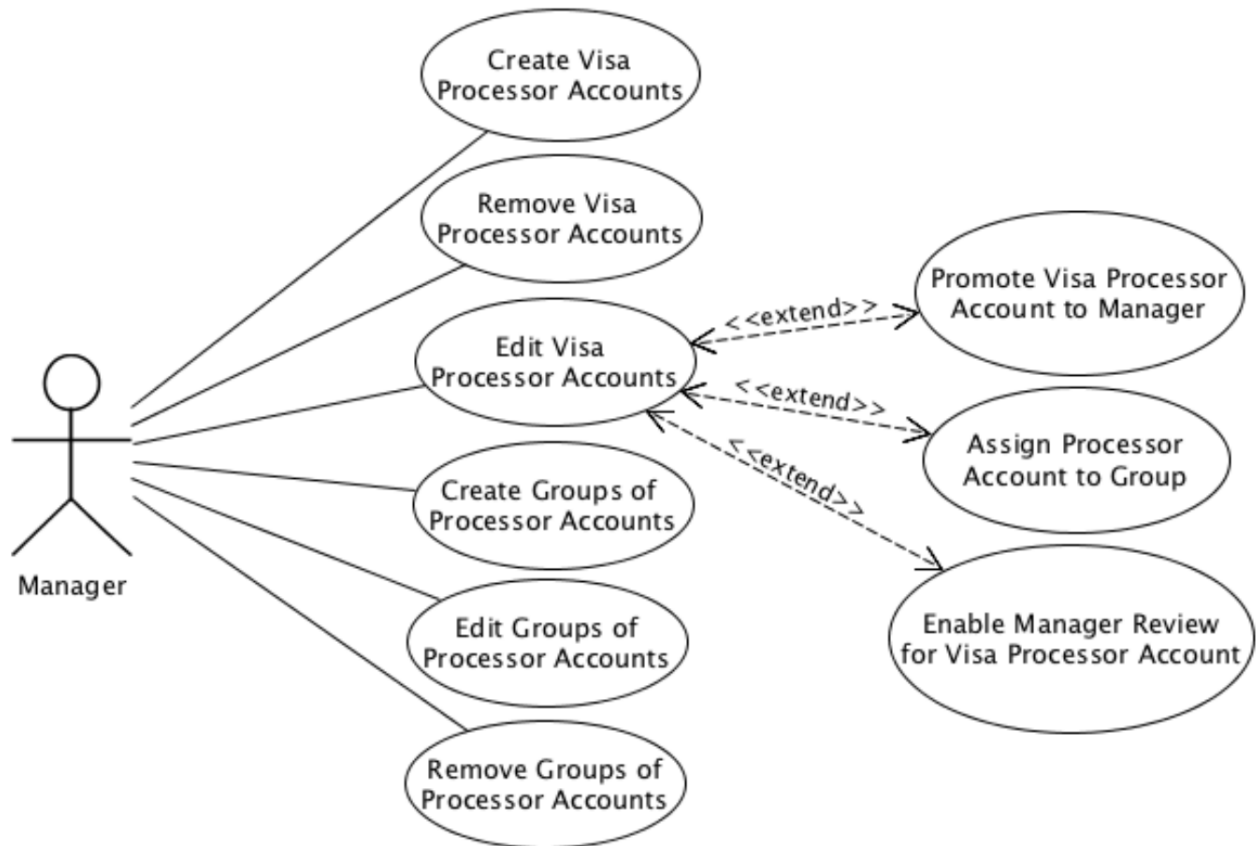


Figure 6: Access Control

Data Gathering



Figure 7: Data Gathering

Approval

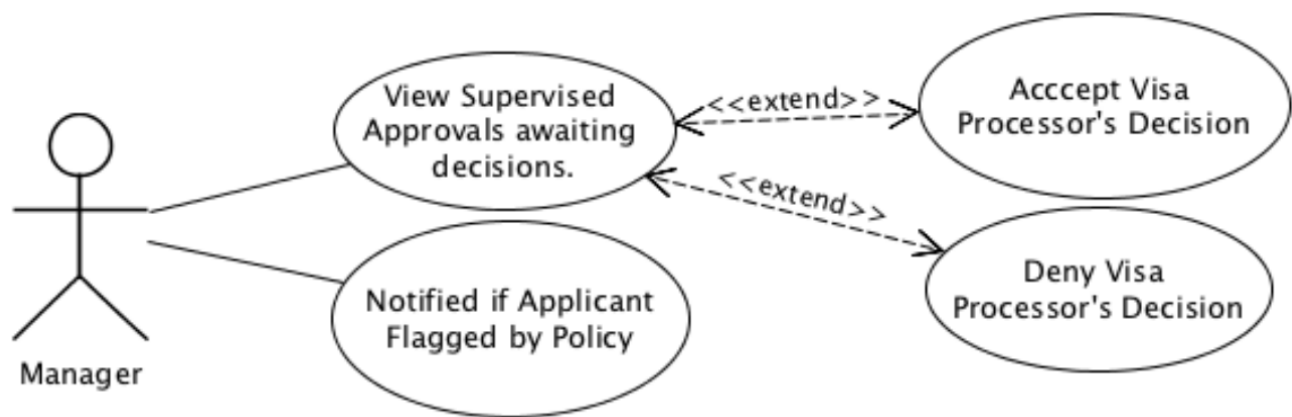


Figure 8: Approval

Actor Descriptions

Actor

Name Description

Visa Processor Less common user but more frequent and with higher permissions. These users will be reviewing data entered by the Visa Applicant users and approve/deny visas.

External Verifier Users who are not responsible for processing applications, nor under the responsibility of a Manager, but have can have significant information influencing a Visa Processor's decision. A Visa Processor can refer an application to an External Verifier to receive a recommendation. Examples of External Verifiers are members of the AFP or FBI, medical doctors responsible for examinations, or an employer verifying that the applicant is an employee.

Manager Manages a group of Visa Processors by creating Visa Processor accounts with necessary restrictions and monitors processor actions and performance.

Policy Manager Rare users, responsible for updating system configuration to reflect changes in visa policy. E.g. introducing a new type of visa, changing the list of countries that automatically require extra attention.

Visa Applicant The person who apply visa through the system.

Use Case Summaries

External Verification

Use Case	Summary
Vias Acceptance	Allows the user to accept or deny a visa application. The user is also able to write notes or comments and attention them to the application
Re-assign to Group	Allows the user to forward a visa application onto another group, in case the user is not qualified or unsure to complete the visa application process
Send portion to external verifier	Gives the user the ability to select different areas of the visa application and forward the detail to an external source, such as the FBI or other organisations

External Verification

Use Case	Summary
View referred application	As an external verifier, I can view the parts of an application that have been referred to me
Comment on referred application	As an external verifier, I can add comments and supporting evidence on an application that has been referred to me
Return referred application that cannot be verified	As an external verifier, I can return the application to the referrer if I believe I cannot verify it for whatever reason.
Return referred application has been verified	As an external verifier, I can return the application to the referrer once I have verified it.

System Configuration

Use Case	Summary
View current system configuration	As a policy manager, I can view all current policy rules
Update system configuration	As a policy manager, I can update a policy rule

Registration

Use Case	Summary
View Guideline	To view the guideline on which visa to apply and how to apply
Visa Registration	Application for applicant to fill up for registering a visa
Update Application	Allow applicant to modify application detail
View Visa Status	Allow applicant to view status and details of the visa applied
Appeal Application	Appeal application to be review again for denied visa applicant
Edit Updates Receiving Method	Modify option of receiving visa related updates

Access Control

Use Case	Summary
Create Visa Processor Account	Allows the manager to create an account for a new Visa Processor
Remove Visa Processor Account	Allows the manager to remove an account for a new Visa Processor

Use Case	Summary
Edit Visa Processor Account Permissions	A Manager should be able to change the permissions of individual Visa Processors
Create Groups of Visa Processors	A Manager can create groups for Visa Processor accounts based on specializations
Assign Processor Accounts to Groups	A Manager can add and remove Visa Processor accounts from the groups. A single Visa Processor account can be within multiple groups

Data Gathering

Use Case	Summary
View Processor Statistics	Managers can view the statistics of groups or individual Visa Processor accounts
Create Notification Conditions for Processor Accounts	Allows the Manager to create certain conditions for individual Visa Processor accounts which, if met, will send a notification to that manager

Approval

Use Case	Summary
Enable Review Requirement for a Processor Account	Managers can enable an individual Visa Processor account's decisions to be reviewed. This can be used for new Processor employees
Promote Processor Account to Manager	A Manager can promote a Visa Processor account to Manager Level. Once conducted, a demotion can only be conducted by system administrators

Use Case Descriptions

Visa Acceptance

Version	0.1
Date	1/4/17
Package	Approval
Summary	Allows the user to accept or deny a visa application. The user is also able to write notes or comments and attention them to the application
Primary Actor	Visa Applicant
Secondary Actor	Visa Processor
Inherits	
Includes	
Extension	
Points	
Business Rules	
Estimate	
Pre-Condition(s)	
Author	Daniel Fitzmaurice

Typical Sequence of Events

Actor Stimulus	System Response
1. Request for Visa Application Document	2. Provides a document ready for viewing
3. User can accept/deny application or take further action	4. Visa application is sent elsewhere to be dealt with

Alternative Sequences of Events

Table 11: Alternative 1 – Re-assign Visa at step 3

Actor Stimulus	System Response
3. User Reassigns application to a different group	4. Visa Application is sent to the other group and a person from within that group will accept or deny the application

Re-assign to Group

Version: 0.1	Date: 2/4/17
Package	Processing
Summary	Allows the user to forward a visa application onto another group, in case the user is not qualified or unsure to complete the visa application process
Primary Actor	Visa Processor
Secondary Actor	
Inherits	Visa Acceptance
Includes	
Extension	
Points	

Version: 0.1 **Date:** 2/4/17

Business**Rules****Estimate****Pre-Condition(s)****Author** Daniel Fitzmaurice

Typical Sequence of Events

Actor Stimulus	System Response
1. User submits request for another group to review	2. User moves application to another group

Alternative Sequence of Events

Table 14: Alternative 1 – The network transmission fails at step 1

Actor Stimulus	System Response
	2.1 The user receives an error message
	2.2 No data is changed

Send portion to external verifier

Version: 0.1 **Date:** 2/4/17

Package External Verification**Summary** Gives the user the ability to select different areas of the visa application and forward the detail to an external source, such as the FBI or other organisations**Primary** Visa Processor**Actor****Secondary** External Verifier**Actor****Inherits****Includes** Provide external verification**Extension****Points****Business****Rules****Estimate****Pre-Condition(s)****Author** Daniel Fitzmaurice

Typical Sequence of Events

Actor Stimulus	System Response
1. User selects data to be forwarded	2. Packages the information into an exportable format and sends the information to an external source

View referred application

Version: Initial Version	Date: 2/4/17
Package	External Verification
Summary	As an external verifier, I can view parts of an application that have been referred to me
Primary Actor	External Verifier
Secondary Actors	Visa Processor
Inherits	
Includes	
Extension Points	
Business Rules	External verifiers can see and comment on only the portion of the application that has been referred to them
Estimate	
Pre-conditions(s)	
Post-Condition(s)	The application has been referred to an external verifier
Priority	Must Have

Typical Sequence of Events

Actor Stimulus	System Response
1. Select the view option for a referred application	2. The referred portion is displayed

Alternative Sequences of Events

Table 19: Alternative 1 – The external verifier has their access revoked at step 1

Actor Stimulus	System Response
	2.1 An error message is shown
	2.2 The external verifier can no longer see the application

Table 20: Alternative 2 – The application has already been approved/denied at step 1

Actor Stimulus	System Response
	2.1 An error message is shown
	2.2 The external verifier can no longer see the application

Comment on referred application

Version: Initial Version	Date: 2/4/17
Package	External Verification
Summary	As an external verifier, I can add comments and supporting evidence on an application that has been referred to me
Primary Actor	External Verifier

Version: Initial Version	Date: 2/4/17
Secondary Actor	Visa Processor
Inherits	
Includes	
Extension Points	
Business Rules	External verifiers can see and comment on only the portion of the application that has been referred to them
Estimate	
Pre-Condition(s)	The application has been viewed by the external verifier
Post-Condition(s)	Any comments made are stored with the application
Priority	Must Have

Typical Sequences of Events

Actor Stimulus	System Response
1. Enter comments and provide supporting documentation	2. The comments and documents are stored with the application

Alternative Sequences of Events

Table 23: Alternative 1 – The external verifier has their access revoked at step 1

Actor Stimulus	System Response
	2.1 An error message is shown
	2.2 The external verifier can no longer see the application

Table 24: Alternative 2 – The application has already been approved/denied

Actor Stimulus	System Response
	2.1 An error message is shown
	2.2 The external verifier can no longer see the application

Return referred application that cannot be verified

Version: Initial Version	Date: 2/4/17
Package	External Verification
Summary	As an external verifier, I can return the application to the referrer if I believe I cannot verify it for whatever reason
Primary Actor	External Verifier
Secondary Actor	Visa Processor
Inherits	
Includes	
Extension Points	

Version: Initial Version	Date: 2/4/17
Business Rules	External verifiers can see and comment on only the portion of the application that has been referred to them
Estimate	
Pre-Condition(s)	The application has been referred to an external verifier, and the external verifier believes they cannot provide verification
Post-Condition(s)	The application has not been reviewed by an external source
Priority	Must Have

Typical Sequence of Events

Actor Stimulus	System Response
1. The verifier selects the cannot verify option on the application	6.1 The application can no longer be seen by the external verifier 6.2 The Visa Processor who referred the application is notified that the application is unverified

Alternative Sequences of Events

Table 27: Alternative 1 – The external verifier has their access revoked at step 1

Actor Stimulus	System Response
	2.1 An error message is shown 2.2 The external verifier can no longer see the application

Table 28: Alternative 2 – The application has already been approved/denied at step 1

Actor Stimulus	System Response
	2.1 An error message is shown 2.2 The external verifier can no longer see the application

Return referred application that has been verified

Version: Initial Version	Date: 2/4/17
Package	External Verification
Summary	As an external verifier, I can return the application to the referrer once I have verified it
Primary Actor	External Verifier
Secondary Actor	Visa Processor
Inherits	
Includes	
Extension Points	

Version: Initial Version	Date: 2/4/17
Business Rules	External verifiers can see and comment on only the portion of the application that has been referred to them
Estimate	
Pre-Condition(s)	The application has been referred to an external verifier, and this verifier has provided comments and or supporting documentation
Post-Condition(s)	The application has been reviewed by an external source
Priority	Must Have

Typical Sequence of Events

Actor Stimulus	System Response
5. Select the return option for a referred application	6.1 The application can no longer be seen by the external verifier 6.2 The Visa Processor who referred the application can proceed with processing

Alternative Sequences of Events

Table 31: Alternative 1 – The external verifier has their access revoked at step 1

Actor Stimulus	System Response
	2.1 An error message is shown 2.2 The external verifier can no longer see the application

Table 32: Alternative 2 – The application has already been approved/denied

Actor Stimulus	System Response
	2.1 An error message is shown 2.2 The external verifier can no longer see the application

View current system configuration

Version: Initial Version	Date: 2/4/17
Package	System Configuration
Summary	As a policy manager, I can view all current policy rules
Primary Actor	Policy Manager
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	

Version: Initial Version	Date: 2/4/17
Pre-Condition(s)	
Post-Condition(s)	No changes to configuration have occurred
Priority	Must Have

Typical Sequence of Events

Actor Stimulus	System Response
1. Select the view policy rules option	2. A list of all current policies is displayed

Alternative Sequences of Events

Table 35: Alternative 1 – The policy manager has their access revoked at step 1

Actor Stimulus	System Response
	2.1 An error message is shown

Table 36: Alternative 2 – A concurrent modification has occurred at step 1

Actor Stimulus	System Response
	2.1 A notification is shown
	2.2 The displayed data is updated

Update policy rules

Version: Initial Version	Date: 2/4/17
Package	System Configuration
Summary	As a policy manager, I can update the policy rule
Primary Actor	Policy manager
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	The policy manager is viewing the list of policy rules
Post-Condition(s)	The selected policy rule is changed system wide, no other data changes occur
Priority	Must Have

Typical Sequence of Events

Actor Stimulus	System Response
1. Select an individual rule	2. The rule becomes editable

Actor Stimulus	System Response
3. Enter new value	4. The new value is displayed
5. Submit	6. The rule is changed system-wide

Alternative Sequences of Events

Table 39: Alternative 1 – The policy manager has their access revoked at step 1

Actor Stimulus	System Response
	2.1 An error message is shown

Table 40: Alternative 2 – A concurrent modification has occurred

Actor Stimulus	System Response
	2.1 A notification is shown
	2.2 The displayed data is updated

Registration – View Guideline

Version: Initial Version	Date: 2/4/17
Package	View Guideline
Summary	View the guideline on which visa to apply and how to apply
Primary Actor	Visa Applicant
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	Guideline needed to exist to be view
Post-Condition(s)	The guideline information is provided to be the Visa Applicant
Priority	Must Have
Author	Wei Qing Chin

Typical Sequence of Events

Actor Stimulus	System Response
1. Visa Applicant want to view guideline	2. Display available guidelines

Registration – Visa Registration

Version: Initial Version	Date: 2/4/17
Package	Registration
Summary	Register visa through application

Version: Initial Version	Date: 2/4/17
Primary Actor	Visa applicant
Secondary Actor	
Inherits	
Includes	<<Update Application>>
Extension Points	
Estimate	
Pre-Condition(s)	The Visa Applicants have been successfully registered in the system.
Post-Condition(s)	The Visa Applicants completed the application and successfully registered for the visa
Priority	Must Have
Author	Wei Qing Chin

Typical Sequence of Events

Actor Stimulus	System Response
1. Visa Applicant want to register visa	2.1 System create and display the visa application 2.2 System record applicant input and upload (extension point: Update Application) 2.3 Update and submit visa application

Alternative Sequences of Events

Actor Stimulus	System Response
	2.1 Update all input and upload before it's closed 2.2 Application is not yet submitted

Registration – Update Application

Version: Initial Version	Date: 2/4/17
Package	Registration
Summary	Allow applicant to modify application detail
Primary Actor	Visa applicant
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	The Visa Applicants have been successfully registered in the system. The Visa Applicants have an existing application
Post-Condition(s)	Visa Application is updated
Priority	Must Have
Author	Wei Qing Chin

Typical Sequence of Events

Actor Stimulus	System Response
1. Visa Applicant want to update personal detail	2.1 Retrieve and display applicant's existing application 2.2 Record applicant input and upload 2.3 Update and submit visa application

Alternative Sequences of Events

Table 48: Alternative 1 – Visa Applicant do not update personal detail at step 1

Actor Stimulus	System Response
	2. Applicant recorded personal details remain same as before

Table 49: Alternative 2 – Visa Applicant close the system without submitting at step 1

Actor Stimulus	System Response
	2.1 Update all input and upload before it's closed 2.2 Applicationn is not yet submitted

Registration – View Visa Status

Version: Initial	
Version	Date: 2/4/17
Package	Registration
Summary	Allow applicant to view status of the visa applied
Primary Actor	Visa Applicant
Secondary Actor	
Inherits	
Includes	
Extension Points	<<Appeal Application>>
Business Rules	
Estimate	
Pre-Condition(s)	The Visa Applicants have been successfully registered in the system. The Visa Applicant's application has been successfully applied in the system
Post-Condition(s)	The Visa Application status is provided to the Visa Applicant
Priority	Must Have
Author	Wei Qing Chin

Typical Sequence of Events

Actor Stimulus	System Response
1. Visa Applicant want to view application status	2.1 Check for applicant's visa application status 2.2 Display applicant's visa application status (extension point: Appeal Application)

Alternative Sequences of Events

Table 52: Alternative 1 – Visa applicant’s visa was denied at step 1

Actor Stimulus	System Response
	2.1 System display “Visa Denied”
	2.2 System display reason of why visa is denied

Registration – Appeal Application

Version:

Initial Version **Date:** 2/4/17

Package Registration

Summary Appeal application to be reviewed again for denied visa applicant

Primary Visa applicant

Actor

Secondary

Actor

Inherits

Includes

Extension

Points

Business

Rules

Estimate

Pre-Condition(s) The Visa Applicants have been successfully registered in the system. The Visa Applicant’s application has been successfully applied in the system. The Visa Applicant’s application was reviewed and denied

Post-Condition(s) The Visa Application is resubmitted to be appealed

Priority Must Have

Author Wei Qing Chin

Typical Sequence of Events

Actor Stimulus	System Response
1. Visa Applicant wants the denied visa to be reviewed again	2.1 Check for applicant’s visa appeal possibility
	2.2 Update and submit applicant’s application to be appealed
	2.3 Change application status

Alternative Sequences of Events

Table 55: Alternative 1 – Visa applicant’s application cannot be appealed at step 1

Actor Stimulus	System Response
	2.1 System display why visa cannot be appealed

Actor Stimulus	System Response
----------------	-----------------

Registration – Edit Update Recieving Methods

Version: Initial Version	Date: 2/4/17
Package	Registration
Summary	Modify option of receiving visa related updates
Primary Actor	Visa applicant
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	The Visa Applicants have been successfully registered in the system
Post-Condition(s)	The Visa Applications choice of receiving update is updated
Priority	Must Have
Author	Wei Qing Chin

Typical Sequence of Events

Actor Stimulus	System Response
1. Visa Applicant wants to change way of receiving the updates	2.1 Check for applicant's current option of receiving update 2.2 Record applicants input 2.3 Update and save applicant input

Alternative Sequences of Events

Table 58: Alternative 1 – Visa applicant did not choose any way of receiving update

Actor Stimulus	System Response
	2.1 System display warning message
	2.2 System could not proceed until applicant chosen an option

Create Visa Processor Accounts

Version: Initial Version	Date: 2/4/17
Package	Access Control
Summary	Create new uniquely identifiable accounts for Visa Processors
Primary Actor	Manager
Secondary Actor	
Inherits	
Includes	
Extension Points	

Version: Initial Version	Date: 2/4/17
Business Rules	
Estimate	
Pre-Condition(s)	
Post-Condition(s)	The account has been created and is accessible by the designated Visa Processor
Priority	Must Have
Author	Mark Belonogoff

Typical Sequence of Events

Actor Stimulus	System Response
1. Click “Create Processor Account” button	2. Opens “new processor account form”
3. Fill out the new processor account form	4. Indicate if required fields have not been filled out
5. Submit “new processor account form”	6.1 Indicates if form was submitted successfully or not
	6.2 Provides information on how new user can access

Alternative Sequences of Events

Table 61: Alternative 1 – System is unable to create an account at step 3

Actor Stimulus	System Response
	3.1 Provide error message with reason why account could not be created
	3.2 Provide possible solution method for manager (e.g. Retry, contact system administrator with error message)

Remove Visa Processor Accounts

Version: Initial Version	Date: 2/4/17
Package	Access Control
Summary	A manager can remove a visa processor account
Primary Actor	Policy Manager
Seconday Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	The Processor account must have been created
Post-Condition(s)	The account has been removed and can no longer be used for the system. All unprocessed applications associated with the account are designated as “unassigned”
Priority	Must Have

Typical Sequence of Events

Actor Stimulus	System Response
1. Click “delete account” for the particular Processor Account	2. Display a confirmation window
3. Accept confirmation for deletion	4.1 Remove the Processor Account from groups 4.2 Unassign all unfinished applications from the account 4.3 Display a reponse indicating that the account has been removed

Alternative Sequences of Events

Table 64: Alternative 1 – The Manager declines the confirmation at step 3

Actor Stimulus	System Response
	3.1 Display response indicating that the Processor account was not deleted

Table 65: Alternative 2 – The system is unable to remove the account at step 4

Action Stimulus	System Response
	4.1 Provide error message with reason why account could not be removed 4.2 Provide possible solution method for manager (e.g. Retry, contact system administrator with error message)

Edit Visa Processor Accounts

Version: Initial Version	Date: 2/4/17
Package	Access Control
Summary	Edit management options for a Visa Processor account supervised by a manager
Primary Actor	Manager
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	
Post-Condition(s)	The account has been created and is accessible by the designated Visa Processor
Priority	Must Have

Typical Sequence of Events

Actor Stimulus	System Response
1. Select Processor account to edit	2. Provide edit options for account to manager as form
3. Submit the new options form	4.1 Indicates if form was submitted successfully or not 4.2 Updates groups to show that options have changed

Alternative Sequences of Events

Table 68: Alternative 1 – The system is unable to remove the account at step 4

Actor Stimulus	System Response
	4.1 Provide error message with reason why account options could not be updated
	4.2 Provide possible solution method for manager (e.g. Retry, contact system administrator with error message)