

GALAXY FORGE GAMES, LLC

# NPC Design Document

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Minsc

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This document contains the required details and information to develop, test, and release the NPC Actor Minsc to the Skyrim Overhaul Mod Project: Baldur's Gate. This document was developed by the design team at GFG, LLC., under the Apache 2.0 License.

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# 1 Overview

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## 1.1 Document Revision Tracking

This document is tracked and organized by the table listing below. Any action made in this document is performed under strict logging to this tracking table. Access to the document is performed in good faith that no action shall be taken on the document without expressly documenting the changes to be performed in the tracking log.

Date	User	Role	Activity
<b>01/16/2017</b>	Jonathan Adams	Project Lead	Initial Creation
<b>01/18/2017</b>	Jonathan Adams	Project Lead	Development of NPC Design Overview. References update. Planning update.

## 1.2 Purpose

The purpose of this document is to provide a reference and development standard for the Non-Player Character, Minsc, for the Skyrim Overhaul Mod: Baldur's Gate software product. This document shall provide a consistent understanding and reflect changes to the structure and design as required by the functionality of the Game Engine. As well, any configuration changes or specific constraints that are encountered during development will be listed and indexed within this documentation.

## 1.3 Scope

### 1.3.1 Objectives

The objective of this project is completely re-create the NPC Companion, Minsc, from Baldur's Gate 1 into the Skyrim Overhaul Mod project. This document shall outline the NPC details and creation procedures under the perspective of the Actor and Quest Dialogue system present in the Creation Kit.

### 1.3.2 Goals

The Goal of this project is to create the actor, Minsc, with an absolute 1-to-1 replication from the Baldur's Gate 1 CRPG into the Skyrim Overhaul Mod project. There are some sections of the NPC which need expansion, and these sections shall be created with respectable quality so as to provide immersion and to replicate the themes and tones of the original Baldur's Gate game design.

### 1.3.3 Architecture

This NPC shall be created using the TESV Creation Kit (CK) software framework. The CK is a complete Skyrim Modding tool which can be utilized to overhaul the original Skyrim game and replace the majority of content with newly developed and modified content.

The CK software is provided to developers and modders by Bethesda Softworks, and works in conjunction with the Creation Engine developed by Bethesda Softworks LLC.

## 1.4 Glossary

These common terms are used throughout the document.

Term	Definition
<b>Quest</b>	A storyline game function in which the Player interacts with other characters by taking on requests for help and service in exchange for rewards.
<b>Player</b>	The Player is another term for the target end user who will utilize this product. The Player specifically refers to the User at the time when they are engaging with the software.
<b>Player Character (PC)</b>	The Character that the player controls. The PC is
<b>Non-Player Character (NPC)</b>	NPC is an acronym for a non-player character, an actor or character that the player interacts with.
<b>Creation Kit (CK)</b>	The development software framework. The Elder Scrolls: Skyrim Creation Kit.
<b>TESV</b>	An acronym for The Elder Scrolls: V (Skyrim), a series of games developed by Bethesda Softworks.
<b>Baldur's Gate (BG)</b>	Baldur's Gate is a CRPG video game created in 1999. Baldur's Gate was originally created by TSR and Black Isle.
<b>Stage</b>	A package of functions, values, objectives, conditions, scenes, and dialogue as separate sections of a quest that can be called or initiated. A stage can be started or stopped through script snippets, console commands, and events that occur as part of the quest execution.
<b>Reference Alias</b>	A pointer-like object that allows a quest to change reference to different locations and actors as required during the quest. A Reference Alias is bundled with items, ai, scripts, and other conditional controls to apply a quest template state to an actor.
<b>Dialogue</b>	The written speech, recorded dialogue, and animations that collectively allows a player to speak with another actor.
<b>Package</b>	An AI Package of data, schedules, locations, and behavior scripts that control what an actor does at any specific time. Packages tell an actor what to do, where to do it, and when to do it.
<b>kmyQuest</b>	The Quest Script utilized by the Quest Dialogue.
<b>Faction</b>	A group of Actors who collectively belong to a group or organization. Their membership in the organization is utilized by the AI system to control their behavior or perform specific actions.

## 2 NPC Design Overview

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### 2.1 Description

The NPC, Minsc, is one of the possible 25 companions available in the game. Minsc is a powerful ranger, with a pent-up berserker rage that he lets loose in the chaos of combat. Minsc was traveling with the witch, Dynaheir, on a “Djeema” right-of-passage when their party was attacked by a group of Gnolls. Dynaheir was taken captive, and Minsc suffered serious head-trauma, leaving him somewhat addled. Minsc eventually acquired a pet hamster named “Boo” that he found after the Gnoll’s assault, and Boo has become his constant companion in his journeys.

Minsc has made it his sole mission to rescue Dynaheir, and he implores the party to help him accomplish this goal. This is accomplished in the NPC side-quest “The Witch from Rashamen: Dynaheir”.

#### 2.1.1 NPC Overview

The proceeding table outlines the major high-level data associated with the NPC.

Major Quest Data	
<b>Name</b>	Minsc
<b>Alignment</b>	Neutral-Good
<b>NPC Type</b>	Companion
<b>NPC Class</b>	Ranger with a focus on heavy-damage as a melee fighter
<b>NPC Locations</b>	Nashkel Guardhouse



## 2.2 NPC Perspective

This section defines the interfaces and perspectives this NPC shares with other objects and functions of the game engine. These processes shall interface in a bi-directional manner unless otherwise defined, and any information related to the structural constraints or limitations of the NPC in conjunction with external facets will be referenced.

### 2.2.1 Location Interfaces

This NPC shall be spawned in a single location in Nashkel near the Nashkel Guardhouse, and remain there until dismissed from the party. When he is dismissed, he and any other associated companion will travel to the Nashkel Inn, where he may be recruited back into the party.

Name	Cell Name	Location Reference	Type
<b>Nashkel Inn</b>	_BG_NashkelInn	_BG_NashkelLocation	Interior
<b>Nashkel Town Area</b>	_BG_NashkelTown01	_BG_NashkelLocation	Exterior

### 2.2.2 Quest Interfaces

The NPC shall interface with three quests; *The Witch from Rashamen: Dynaheir*, and *Companion Dialogue*.

In this NPC side-quest, Minsc seeks to employ a party of adventurers to help him rescue his friend, Dynaheir. Dependent on the player's response, Minsc will either become a reoccurring companion option, or he will attack the party.

The Companion Dialogue quest is purely an NPC Dialogue Quest, and Minsc is provided with standard speech and dialogue banter as a companion.

Finally, the Companion Manager Quest allows Minsc to be added as a companion follower of the player.

Quest	Quest Name	Type	Interface Purpose
<b>The Witch from Rashamen: Dynaheir</b>	_BG_NPCSQ_Dynaheir	NPC Side-Quest	Minsc's personal NPC side-quest.
<b>Companion Dialogue</b>	_BG_DialogueCompanion	Dialogue Quest	Provides Minsc with generic speech.
<b>Companion Manager Quest</b>	_BG_DialogueFollower	Follower Quest	Allows Minsc to be added as a companion and follower to the party.

### 2.2.3 NPC Interfaces

Minsc retains two specific NPC Interfaces; Dynaheir and Edwin.

Dynaheir is Minsc's specialty travel companion. In completing Minsc's associated NPC Side-Quest, Minsc shall only remain in the party so long as Dynaheir is in the party.

Edwin is the antagonist to Minsc. Edwin seeks the death of Dynaheir, and Minsc will defend her at any cost. If provoked through the correct dialogue, Minsc will attack and kill Edwin.

Name	Actor	Type	Functional Usage
<b>Dynaheir</b>	_BG_Dynaheir	Friendly, Companion	Target of the Dynaheir NPC Side-Quest and possible companion.
<b>Edwin</b>	_BG_Edwin	Friendly, Companion	Antagonist of the Dynaheir NPC Side-Quest and possible companion.

### 2.2.4 Item Interfaces

Minsc has one item interface – a special companion named Boo who is locked to Minsc's inventory. Boo cannot be moved, sold, traded, or dropped from Minsc's inventory. Boo makes a unique "Peep" noise when examined.

Name	Item ID	Type	Functional Usage.
<b>Boo</b>	_BG_Boo	Specific Item: Animal	A lore-centric item for Minsc.

### 2.2.5 Script Interfaces

This NPC has no script interfaces defined outside of his associated quest interfaces.

### 2.2.6 Package Interfaces

Minsc has no package interfaces defined outside of his associated quest package interfaces, or at the actor-level.

### 2.2.7 Faction Interfaces

Minsc has no factions interfaces defined outside of his associated quest interfaces, or at the actor-level.

## 2.3 NPC Design

This section describes the overall design of the NPC Actor. All information relevant to the individual design and function of the Actor, and any calls to and from external interfaces are defined within the scope of the NPC design.

### 2.3.1 NPC Appearance

Minsc is a tall and imposing northern warrior from the far-off nation of Rashamen. He is bald, has a wide jaw, brown eyes, and a circular purple tattoo the right side of his face. He wears earrings, and has many cuts and scars on his face from combat.



*Figure 1 - Minsc Appearance*

### 2.3.2 NPC Traits

The associated table provides a list of Actor traits for the accurate design of the Actor.

Trait	Data
<b>Race</b>	NordRace
<b>Gender</b>	Male
<b>Skin</b>	None
<b>Height</b>	1.00
<b>Weight</b>	95.0
<b>Far-Away Model</b>	None
<b>Voice Type</b>	_BG_MaleMinsc
<b>Weapon List</b>	None
<b>Alignment</b>	None
<b>Disposition Base</b>	None
<b>Death Item</b>	None
<b>Opposite Gender Anims</b>	None

Additionally, the following table displays the Actor properties.

Property	Data
<b>CharGen Preset</b>	False
<b>Encumbrance</b>	False
<b>Essential</b>	False
<b>Protected</b>	False
<b>Respawn</b>	True
<b>Unique</b>	False
<b>Summonable</b>	False
<b>Is Ghost</b>	False
<b>Invulnerable</b>	False
<b>Doesn't Bleed</b>	False
<b>Simple Actor</b>	False
<b>Doesn't Affect Stealth</b>	False

### 2.3.3 NPC Packages

This NPC maintains a set of packages dependent on his participation as a player-follower, and also whether or not the Dynaheir NPC Side-Quest is completed.

This package will make Minsc default idle at the Nashkel Inn when he is not part of the Player's companion group. This should be the last package applied to his Actor stack.

Package Name	Minsc Nashkel Inn Sandbox
Package ID	_BG_MinscNashkelInnSandbox
Package Type	Sandbox
Conditions	CurrentFollowerFaction Rank == -1
Description	NPC will Sandbox in the Nashkel Inn
Location	_BG_NashkelInn (Interior Cell)
Duration	Constant
Notes	Minsc shall move to the Nashkel Inn from wherever he is dismissed. He shall use any idle in the Inn assigned to the Nashkel Town Faction.

When Minsc is not part of the Player's companion group, he will have the following sleep package, which allows him to sleep in the rooms in the Candlekeep Inn. This package should be at the top of Minsc's package list.

Package Name	Minsc Nashkel Inn Sleep
Package ID	_BG_MinscNashkelInnSleep1x5
Package Type	Sleep
Conditions	CurrentFollowerFaction Rank == -1
Description	NPC will sleep in the Nashkel Inn in any available bed.
Location	_BG_NashkelInn (Interior Cell)
Duration	5 hrs.
Duration Start	1
Duration End	6
Notes	Minsc shall move to the Nashkel Inn from wherever he is dismissed. He will use any available bed, which should be owned by the Nashkel Town Faction by default.

### 2.3.4 NPC AI Data and Combat Behavior

In order for Minsc to properly support the player as a follower, Minsc must have the following properties assigned for his AI Data.

Attribute	Data
<b>Aggression</b>	Unaggressive
<b>Confidence</b>	Foolhardy
<b>Assistance</b>	Helps Friends and Allies
<b>Mood</b>	Happy
<b>Energy</b>	75
<b>Morality</b>	Any Crime

Additionally, Minsc will utilize the following combat characteristics in order to fight properly against enemies.

Attribute	Data
<b>Aggro Radius Behavior</b>	True
<b>Warn</b>	128
<b>Warn/Attack</b>	128
<b>Attack</b>	128
<b>Combat Style</b>	_BG_MinscCombatStyle
<b>Gift Filter</b>	None

Minsc will utilize his own unique combat style, the `_BG_MinscCombatStyle`. This style allows him to focus on hard-hitting critical attacks with a melee weapon that favors his Berserker abilities, and minor back-up using a ranged compound bow. Minsc will not utilize shields if possible, and will instead seek to aggressively dual-wield over defense.

### 2.3.5 NPC Stats, Spells, Abilities, and Skills

Minsc is a tough melee fighter, considered one of the strongest in the game. He specializes in Two-Handed Fighting, One-Handed Fighting, Dual-Wielding, Heavy and Medium Armor, some Archery, and some Sneaking. Minsc has the following skill level weights, provided by his specialized class `_BG_CombatBerserkerMinsc`.

Skill Name	Value
<b>One-Handed</b>	2
<b>Two-Handed</b>	3
<b>Archery</b>	1
<b>Block</b>	1
<b>Smithing</b>	0
<b>Heavy Armor</b>	2
<b>Light Armor</b>	2
<b>Pickpocket</b>	0
<b>Lockpicking</b>	0
<b>Sneak</b>	1
<b>Alchemy</b>	0
<b>Speech</b>	0
<b>Alteration</b>	0
<b>Conjuration</b>	0
<b>Destruction</b>	0
<b>Illusion</b>	0
<b>Restoration</b>	0
<b>Enchanting</b>	0

As well, Minsc's specialized Berserker class shall have the following Attribute Weights.

Attribute	Data
<b>Health</b>	2
<b>Magika</b>	1
<b>Stamina</b>	3

He will scale alongside the player's growth as allowed by the configurations designated in the proceeding leveling table.

Attribute	Data
<b>Level Mult</b>	1.00
<b>PC Level Mult</b>	True
<b>Calc Min</b>	1
<b>Calc Max</b>	100

Minsc shall also have the following offsets which favor his brutal aggressive style. Minsc has excessive strength and endurance in the original game, and his stats should favor this. Minsc shall also have

enough Magika available to allow him to cast Berserk atleast once. As well, he will be as fast as a normal character.

Attribute	Data
<b>Health Offset</b>	30
<b>Magika Offset</b>	10
<b>Stamina Offset</b>	20
<b>Speed</b>	100

Finally, Minsc will have two special abilities available due to his Berserker and Ranger core class features.

From his Berserker class, Minsc shall be provided with a raging ability.

Ability Name	Berserker Rage
<b>Spell Name</b>	_BG_BerserkRage
<b>Spell Cost</b>	10
<b>Description</b>	The NPC summons a blind rage, which increases stats but sends them into an uncontrollable fighting fury.
<b>Bonuses</b>	Bonus Health, Bonus Stamina, Enemies Feared, Bonus Damage (2h), Bonus Damage (1h)
<b>Duration</b>	3 minutes
<b>Animations</b>	Red Summoning Effect
<b>Casting</b>	Ability / No Hands
<b>Notes</b>	During a Berserk Rage, the NPC should be able to strike a player or another follower.  At the end of a rage, the NPC should be damaged equal to 10 hitpoints.

From his Ranger class, Minsc shall have the ability to charm and animal to fight for him.

Ability Name	Charm Animal
<b>Spell Name</b>	_BG_CharmAnimalRanger
<b>Spell Cost</b>	20
<b>Description</b>	The NPC charms a target animal who will fight by his side.
<b>Bonuses</b>	Charm: Target (Animal)
<b>Duration</b>	5 minutes
<b>Animations</b>	Green Summoning Effect
<b>Casting</b>	Right or Left Single-Hand.
<b>Notes</b>	There is no joint stacking effect that occurs from this ability being cast with both hands.



### 2.3.6 NPC Items and Inventory

Minsc is provided with a default list of items, and also given a value of gold dependent on the player's level.

Minsc utilizes the following outfit list, defined as the *\_BG\_MinscArmorOutfit*.

Item Name	Item ID	Location
<b>Splint Mail (Purple)</b>	_BG_ArmorSplintPurple	Chest
<b>Scale Bracers</b>	ArmorScaledGauntlets	Arms
<b>Scale Boots</b>	ArmorScaledBoots	Feet

Minsc is also given the following items into his inventory.

Item Name	Item ID	Item Type	Value	Qty	Special Conditions
<b>Two-Handed Iron Sword</b>	_BG_IronGreatsword	Weapon	50 gp	1	None
<b>Torch</b>	LItemTorch05	Item	3 gp	3	None
<b>Gold</b>	_BG_Gold001	Treasure	1-5 gp	1-5	Dependent on party level
<b>Boo</b>	_BG_MinscBoo	Special	N/A	1	Non-tradeable, Non-droppable, Non-destroyable

### 2.3.7 NPC Factions

Minsc maintains multiple factions which allows him to become an NPC Follower. These are attached in a hard-association to Minsc at the Actor-level. These factions shall allow Minsc to become a follower, and attack enemies of the player.

The following table identifies the necessary factions that Minsc shall have in order to be a follower.

Faction Name	Rank	Purpose
<b>CurrentFollowerFaction</b>	-1	Allows NPC to be a follower, and will follow on rank change.
<b>PlayerFaction</b>	0	
<b>PotentialFollowerFaction</b>	0	
<b>PotentialMarriageFaction</b>	-1	

When Minsc is not a follower of the player, he shall have the following factions which allow him to reside in Nashkel and receive proper protection from the local guards.

Faction Name	Rank	Purpose
<b>_BG_CrimeFactionNashkel</b>	0	Default assigned crime faction.

<b>_BG_TownNashkelFaction</b>	0	Default town member faction which allows for general use of idle markers and town member packages.
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### 2.3.8 NPC Relationships

Minsc has the relationships with the player and other NPCs, defined in the proceeding table.

Relationship	Rank	Type
<b>Player</b>	Ally	UNNAMED
<b>Dynaheir</b>	Ally	UNNAMED

## 3 NPC Design Planning

This section outlines the timetables and development concerns for the planned creation of the quest.

### 3.1 Development and Testing

This NPC shall be developed under the following development schedule. There are three phases for the development: Actor Development, Unit Testing, and Final Acceptance Testing.

#### 3.1.1 Sub-Phases

With each phase, there are multiple sub-phases.

##### 3.1.1.1 Actor Development

Actor Development has five sub-phases; Actor Form Creation, Item Creation, Package Development, Faction Development, and Dialogue/Voice Recording.

Sub-Phase	Task Scope
<b>Actor Form Creation</b>	The Actor form, actor configurations, actor scripts, and actor 3D appearance imports.
<b>Item Creation</b>	The Item forms, item configurations, item scripts, and item 3D appearance imports.
<b>Package Development</b>	The Package forms, Package configurations, Idle and Package-based Markers, and any associated scripts.
<b>Faction Development</b>	The Faction forms, faction associations, faction configuration changes, Faction Ownership declaration and configurations, Rank designation and creations.
<b>Dialogue/Voice Recording</b>	Development of the quest writing and dialogue, voice recording, and actor animation events for speaking.

##### 3.1.1.2 Unit Testing

Unit testing is performed as sub-tasks are completed in the development phase. Each Development Sub-Phase has a corresponding Unit Testing phase.

##### 3.1.1.3 Acceptance Testing

Acceptance Testing is performed at the end of the NPC creation, during the final weeks of development. Acceptance testing shall validate that all packages and dialogue operate properly, and that conditions managing packages and factions are validated as correctly operating.

### 3.1.2 Tasks

See the Asana Minsc NPC Actor Webpage for task tracking and management.

### 3.1.3 Resources

This NPC shall be developed with minimal resources. This project is developed as a hobby project, and team members shall contribute time as available.

### 3.1.4 Budget

This project is developed under a limited budget. No funding shall be available for the creation of this NPC.

### 3.1.5 Schedule

The following time-scale table shows the development sequence and planned unit-testing phase. Once Full NPC Acceptance Testing is completed, a final phase to capture video recordings for marketing and advertisement will be performed. There is no timescale for completion of this final event.

Task	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Actor Development	X	X				
Actor Unit Testing		X				
Faction Development	X	X				
Faction Unit Testing		X				
Package Development	X	X	X			
Package Unit Testing			X	X		
Item Development		X	X			
Item Unit Testing			X			
Dialogue Development			X	X	X	
Dialogue Unit Testing				X	X	
Acceptance Testing						X
Final Marketing Materials Collected						X

## 4 Appendix

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### 4.1 References

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## 4.2 License

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NPC Design Document: Minsc

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### 5.1 Dialogue References

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