

Health Games Research

Game/Game Prototype Description

Title: xxxxxx (your project title goes here, 15 words or less) xxxxxx

Principal Investigator: xxxxxx (your PI name goes here) xxxx

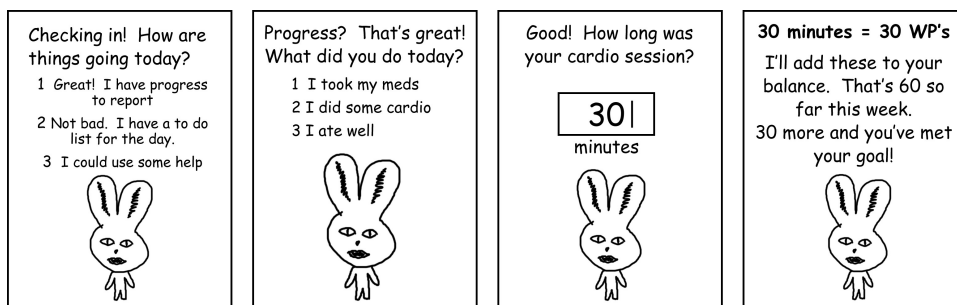
Applicant Organization: xxxxxx (applicant organization name goes here) xxxxxx

ABSTRACT: Wellness Partners is a character-driven social activity that uses elements from virtual pets, role-playing games, and social networks to motivate real-world wellness by helping players to leverage their existing social networks as sources of encouragement, community and support. Players are rewarded with new character abilities, attributes and props in the game space for choosing and sustaining lifestyle changes and engaging in physical activities.

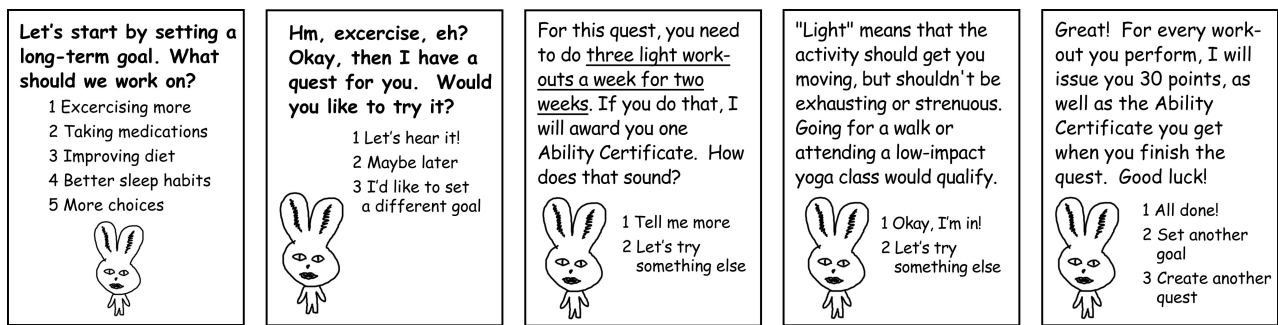
PROTOTYPE DESCRIPTION: The game is played on two platforms, cell phone and web browser, with each providing the same functionality. While much of the game is a single player experience, the game allows for communication between the player and members of their social network throughout gameplay for purposes of support, checking progress, and completing group tasks. The Wellness Partner character is a fictional creature, similar in appearance to a small bipedal mammal. A WP can offer encouragement and reminders, check on progress, and even pass messages to other players' WP's. The WP becomes both the face of the game and an alter ego for the player.

What can the player do?

Self-Report: Reporting one's outside health behaviors, like exercising and eating well, is a core mechanic behind much of the Wellness Partners game. Self-reported behaviors drive the accomplishment of goals and completion of quests, the acquisition of resources to be used in the game, and are the focus of player-to-player communication within the game. Self-reporting occurs when the player logs into Wellness Partner to report real-world health behaviors, like running laps or riding a bicycle. The game translates these behaviors into points, which are then used to fuel the rest of gameplay.



Set Goals: An important feature of Wellness Partners is that quests are tailored to the player's health goals. With the help of the game, the player can set goals like improving exercise habits or sleeping better. Wellness Partners will then help the player develop subgoals, or quests, in service of the larger goal.



The game also supports group quests that are initiated and undertaken by members of the same social network, and might include such tasks as "everyone must complete one minor quest this week," or "we will all go for a run together on Friday." To begin a group quest, one player must choose to create and initiate the quest, and then invite other players to join. From there, the players' Wellness Partners will facilitate and reward the process in the same way they would an individual quest.







Interact with WP: Interacting with one's Wellness Partner is an important part of the game. The player's conversations with WP are conducted via forms and multiple choice answer sets. The WP can initiate contact on its own once the Wellness Partner application is running, and will do so to deliver reminders and in-game messages from other players. At any time, the WP can also be summoned by the player.

Interact with Social Network: An important component of the Wellness Partner game is the ability to connect with other players. While the game is not a persistent world, in the sense that players are not all present in the world at the same time (as in games like Second Life or World of Warcraft), Wellness Partner does allow for communication between players. This communication is accomplished entirely via the game interface, both on cell phones and in the web game. In the game, the player can access a Friends List which includes other players they have identified as friends. These other players might include friends, coworkers, family members or health professionals; ideally, they are people who will provide support and encouragement to the player as they work to improve their health. Communication can involve something as simple as sending one's Wellness Partner to remind another player to self-report, or something as involved as engaging in a group quest where members of the social network can work toward a common health goal. Communication is covered in further detail below.

Track Progress: A helpful tool when improving one's health is the ability to view progress over time. In Wellness Partners, this function is served by the Wellness Center. The player can take their WP to the Wellness Center and have it checked. The attendant will then provide the player with detailed statistics about their progress, as well as point out any trends it observes developing over time. It might also suggest methods for further improvement, based on progress and trends observed thus far. In addition, players can compare their progress with the progress of people in their social network.

Earn Rewards: Completing tasks and quests in Wellness Partner will earn the player rewards throughout the game. At times, players are given the option of which reward they would like to receive. In these situations, players are allowed to select from a list that might include new







abilities, attributes or props for their WP's. Rewards and the requirements for earning them are described in greater detail below. Rewards can be potentially gifted or exchanged.

<p>I see you have some Ability Certificates saved up. Would you like to spend one?</p> <ol style="list-style-type: none"> 1 Sure! 2 Maybe later 	<p>What fun! How many would you like to spend?</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">1 </div> 	<p>All right! Today, I can learn to levitate, dance, or change my fur color. Which shall I learn?</p> <ol style="list-style-type: none"> 1 Levitate 2 Dance 3 Change fur color 4 Never mind 	<p>Ooo, dancing DOES look like fun. Okay, here goes!</p> 	<p>Hooray! Check it out, I can dance now!</p> 	<p>Whew, that was fun! Okay, now what should we do?</p> <ol style="list-style-type: none"> 1 Show me that dance again 2 Let's see your other tricks 4 I want to redeem another Certificate 3 Let's go back to the main menu 
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Communication and Social Networks

Leveraging one's social network is a key component of the Wellness Partner program. Players are required to register for the game in groups of at least 2, ensuring that every player has at least one person to turn to for camaraderie, encouragement, and congratulations. The player's social network can be accessed through their Friends List, which operates much like a friend or buddy list in common chat programs. Players' user names are displayed, as is their status. In chat programs, "status" refers to whether a user is online and available for chat or not. In Wellness Partner, "status" is a quick update on that player's progress with their chosen tasks. What others are permitted to see is up to the player.

In addition to viewing friends' progress, Wellness Partner offers the ability to send them messages in-game. These messages are carried by the player's Wellness Partner, who will "visit" the player's friends to deliver a short message dictated by the player. The recipients will get the message the next time they log into the Wellness Partner application. It is anticipated that participants will also use outside forms of communication like SMS, telephone, and email to communicate about the game. However, the Wellness Partner prototype will only include "w-Mail" messages.

<p>What would you like to do today?</p> <ol style="list-style-type: none"> 1 Self Reporting 2 Check w-Mail 3 Check on Friends 4 Review quests 5 Redeem Points and Certificates 6 Other options 	<p>Okay, here's what your friends are up to today:</p> <ol style="list-style-type: none"> 1 Peggy 30 pts today 2 Brian 40 pts yesterday 3 Mom No activity this week 4 Back to menu 	<p>You selected Mom. What would you like to do now?</p> <ol style="list-style-type: none"> 1 View Mom's long-term progress 2 Send Mom a w-Mail message 3 View group quests I have with Mom 4 Go back to my Friends List 	<p>Okay, what should the message say?</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> <p>Checking in. Don't see any walking this week...everything okay over there?</p> </div> 	<p>So I am to tell Mom: "Checking in. Don't see any walking this week...everything okay?" Is that right?</p> <ol style="list-style-type: none"> 1 Yes, please send it! 2 That's not quite right 3 Don't send a message after all 	<p>Success! I stopped by Mom's and relayed your message. It'll be there next time Mom logs in.</p> <ol style="list-style-type: none"> 1 Show my Friends List 2 Send another w-Mail 3 Check my w-Mail 4 Main menu, please 
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Earning Rewards

During gameplay, players complete two basic types of tasks: completing quests, and completing the tasks that make up those quests. Players can also earn points through regular self-reporting, visiting friends to see how they are doing, making contributions that other players rate as helpful, etc.

Certificate Redemption: When a quest is completed, the game rewards the player with Ability Certificates. These can be redeemed by the player to earn new abilities for their Wellness

Partner, including new tricks for it to perform and occasionally the chance to further customize the Wellness Partner's appearance.

Spending Points. The day-to-day tasks associated with maintaining one's health (and completing Wellness Partner quests) are opportunities to earn points in the game. When the player reports these behaviors, they are converted into points, which can be used like currency in the game. Points can earn the player one of two resources: energy and Ability Certificates. Energy is the resource that powers the player's Wellness Partner; without sufficient Energy, the Wellness Partner cannot do tricks and will eventually begin to look tired or dirty, as if it is not taking care of itself. The Energy resource serves two functions: it allows the player to identify with their Wellness Partner by creating a direct correlation between taking care of oneself and taking care of Wellness Partner, and it encourages the player to regularly engage in healthy behavior and then report that to the game. In addition to spending points on Energy, points can be spent on Ability Certificates. An element of strategy is introduced; the player must learn to balance how much is spent on Energy with how many new Abilities they wish to acquire.

Trust and Self-Reporting

It is possible that a component of Wellness Partner's player population will lie when presented with the requirement of self reporting. This dishonesty is anticipated because real world behavior is used as a mechanism for progressing in the game, and therefore the temptation to lie is especially strong. To address this issue, three "trust models" are being developed, and will be tested during the early phases of Wellness Partner's development for effectiveness. The three models are:

Complete trust: Wellness Partner accepts without question the self-reporting of the player. There is a direct one-to-one correlation between behaviors reported and rewards received.

Chance: When the player reports behavior, they are not rewarded every time. Instead, a chance algorithm determines whether a reward is given. The game will essentially "roll the dice" to decide if rewards are given or not. This model will have to be tested to ensure that rewards are given often enough to keep players interested, but not so often that rewards are a sure thing; it is based loosely on the reward model of a slot machine.

Verification: Wellness Partner will accept a player's self reporting only if another player will verify that the behavior being reported actually happened. This introduces social pressure, because the player must ask another person to either verify that they are being truthful or lie for them. It is expected that in most cases, players will choose to be faithful, rather than try to get another player to lie for them.

Hardware

The Wellness Partner game will be developed for two platforms: cell phone and web browser. Each platform will provide the same game functionality, while the web browser will also handle the program sign-up process and the initial program setup process.

Program Setup: When participants wish to join the Wellness Partner program, they will first

visit the Wellness Partner website. There, they will provide some personal and contact information, including some basic health information and a mailing address. They will be emailed instructions and issued a cell phone with the Wellness Partner application installed. Once the phone arrives in the mail, players log back into the Wellness Partner website to complete initial setup, including receiving and customizing a Wellness Partner, setting some long and short term goals, and setting privacy boundaries. After this initial setup, all further game interactions can be conducted via either the cell phone or web interface. Note: When cell phone supplies run out, players will be allowed to sign up only for the web version of the game. In addition, only the first 2-3 members of a given social network will be issued phones.

Play Scenarios

Brian, a 37 year old professional, logs into Wellness Partner from his cell phone while on his lunch break. His WP tells him that his friends have been hard at work, so he chooses the Friends List option to see what everyone has been up to. He sees that his wife earned 30 points this morning, his mother hasn't logged any activity in a few days, and his coworker just finished a quest. He directs his Wellness Partner to visit his mother with a general "checking in" message. The WP leaves his screen and returns after a moment to inform him that the message was successfully transmitted. Brian's in-game account is credited 5 points as a reward for his helpful behavior, and he will be informed if his mother replies or reports new activity. Brian logs out of Wellness Partner and closes his cell phone as he returns to work.

Peggy, a 44 year old mother of three, logs into Wellness Partner from her PC at home. She directs her WP, Bob, to the Wellness Center. There, the attendant "examines" Bob and gives her a report of its overall health, a metaphor for Peggy's own progress with the Wellness Partner program. She sees that overall she averages 30 minutes of activity a day, with her periods of most activity occurring on weekends. She can also see that the relative intensity of her workouts has increased in the month since she's been playing Wellness Partner. Because of her progress, the attendant issues her an Ability Certificate. With this certificate, Peggy can acquire a new ability for Bob or customize its appearance. Bob informs her that it will be visiting people on her Friends List to give them the good news. Satisfied with her progress, Peggy logs out of Wellness Partner and continues to browse the web.

Prior Art

Wellness Partners draws from existing commercial games and applications in its models of game mechanics and player expectations. Some influences for Wellness Partners include:

Maple Story, a Nexon MMORPG for PC that is extremely popular in South Korea and, to a lesser extent, the US. It is characterized by a 2D graphic style, casual mode of play, and heavy emphasis on avatar customization as a reward. *Animal Crossing* is a Nintendo social game and persistent world for Game Cube and Nintendo DS. It is characterized by player goal setting, use of real-world time frame, player socialization, and care of a virtual creature. *Nintendogs* is a Nintendo virtual pet for Nintendo DS. It is characterized by care of a virtual creature whose health and appearance are dependent on player behavior and use of real-world time frame. *Facebook* is an online social network characterized by player socialization, profile and privacy customization, internal communication tools, and a "friends list" with status messages and updates. *Weight Watchers* is a weight loss program with in-person and online components. It is characterized by translation of real-world health behaviors into a points system and user-defined goal setting.