

"LIFE SENTENCE." (Working Title) Design Document



OVERVIEW:

"Life Sentence." (working title) is a web-based virtual experience/ game in which multiple users channel their collective consciousness into the mind of a single transpersonal human being. Exploring the differences between positive and negative thought patterns on an individual's inner and outer life, the application features a shared avatar that evolves emotionally based on the types of thoughts it receives and the life experiences that are generated from these thoughts.

SCREEN AND AUDIO ELEMENTS:

Interface:

There are two main sections in the interface:

- *Mind View:* This section occupies the top two-thirds of the screen. It is where users can view the avatar close up and jointly participate in the formation of thoughts in his mind bubble. Directly below the mind bubble, words float through the cloud stream from left to right at varying rates. Their initial placement in the stream is random. When a word floats off the right side of the screen, it automatically returns to a designated starting location on the left side.

- *World View*: This section occupies the lower third portion of the screen. It is where users can view the avatar (full-body) moving from one life structure (ie: home, work, school, store, car etc.) to another. Aside from these life structures, the world view is an empty expanse of white clouds.

Life Structures:

Structures are two-dimensional and largely suburban in style. The types of structures that can be created in the game fall into archetypal categories pertaining to a typical human's everyday life. These types of structures include:

- *house* (shack, small house, large house, mansion)
- *store* (grocery, deli, clothing, department, furniture, electronics, hardware, jewelry, laundry/ drycleaner)
- *restaurant* (diner, fast food, steakhouse, fine dining, ethnic food)
- *school* (college/ university, trade school)
- *office building* (standard, high-rise)
- *specialty building* (police station, fire station, hospital)
- *car* (used Volkswagen, Honda, Ford, Mercedes)
- *factory* (plant, manufacturer)
- *bar* (club, lounge, bar)
- *recreational center* (bowling alley, pool hall)
- *gym* (fitness center, gym)
- *religious building* (TBD)

Structures are created from common building elements to minimize movie and file sizes. These common building elements include:

- façades (brick, steel, wood, stone, concrete, glass, etc.)
- posts/ columns
- beams
- doors
- chimney
- rooftops
- awnings
- signs
- trees
- hedges

Sounds:

Scenario 1 (to be tested):

Atmospheric sound and voice-over segments (15 to 30 seconds each) encapsulate the avatar's experience inside each life structure. Each audio segment is dynamically created from a variety of clips stored in the online database. A clip can be an atmospheric sound or short voice-over. Voice-overs pertain to non-visual characters that become a part of the avatar's life. They may be either muffled (experiential, abstracted) or discernable (specific) when crucial information about the avatar's progress is being revealed. Every clip has an associated life structure (category) and one or more associated emotions that contributes to the overall meaning of the segment.

Atmospheric Sounds:

- house
 1. peaceful/ bored (quiet, party:lame)
 2. happy/ excited (party:happening)
 3. annoyed/ angry (party:out of hand)
- grocery store
 1. peaceful (quiet)
 2. confused/ annoyed (overly busy/crowded)
- restaurant
 1. peaceful (quiet, gentle music playing)
 2. annoyed (loud/noisy, irritating music playing)
- school
 1. peaceful/ bored/ depressed (quiet)
 2. annoyed (students shouting)
- office building
 1. peaceful/ bored/ depressed (quiet)
 2. annoyed/ anxious (busy)
- specialty building
 1. peaceful/ bored (quiet)
 2. anxious (busy/ noise, workers/ officers shouting)
- factory
 1. bored/ depressed (quiet, constant droning of machines)
 1. anxious (loud noises)
- bar
 1. bored/ depressed (quiet)
 2. happy/ excited (jovial atmosphere, great music)
 3. annoyed (music too loud, overly noisy)

- gym
 1. peaceful (quiet)
 2. annoyed (crowded/ noisy)

Voice-overs:

- general (more than one location)
 1. happy/ excited (girlfriend accepts marriage proposal)
 2. sad/ depressed/ upset (girlfriend rejects marriage proposal)
- house
 1. happy (girlfriend/ wife talks gleefully with avatar)
 2. happy/ excited (girlfriend/ wife overjoyed with avatar)
 3. sad/ upset (girlfriend/ wife crying)
 4. angry/ upset/ bitter/ sad (wife wants to divorce avatar)
- workplace
 1. happy/ proud (boss hires avatar)
 2. sad/ frustrated/ bitter (boss turns avatar down for job)
 3. sad/ angry/ bitter (boss fires avatar)
 4. angry/ bitter (boss yells at avatar)
 5. sad (co-worker crying)
 6. annoyed (highly stressed co-workers)
- store
 1. angry/ upset/ annoyed (clerk yells at avatar)
 2. happy (clerk is friendly)
 3. annoyed/ bored/ rejecting (boring old man talks to avatar)
- school
 1. proud/ happy/ confident/ hopeful (avatar graduates)
 2. proud/ happy (avatar receives good report)
 3. depressed/ annoyed (avatar receives bad report)
- restaurant
 1. annoyed/ anxious (customer creates a “scene”)
 2. happy (waitress is friendly)
 3. bored (no voice-over)
- bar
 1. annoyed/ angry (drunk jerks acting up)
 2. happy (friendly women)
 3. happy (bartender friendly)
 4. bored (no voice-over)

- gym
 1. happy (getting results)
 2. sad/ depressed (not getting results)
 3. annoyed/ rejecting (obnoxious show-off talks to avatar)
 4. upset/ surprised/ embarrassed (avatar has accident)

Character sprites:

Full-motion video of the avatar (male) treated with a subtle median filter.

World View:

- FULL SHOT, Side View -- standing still
- FULL SHOT, Side View -- walking from one structure to another
- FULL SHOT, Side-to-Rear View – walking to structure; turning and entering the structure
- FULL SHOT, Front-to-Side View – exiting a structure; walking toward next structure
- FULL SHOT, Front-to-Side View – exiting a structure; getting into car; sitting in car
- MEDIUM SHOT, Side View – inside car, driving
- FULL SHOT, Side-to-Rear View – getting out of car; entering a structure
- FULL SHOT, Front View – emerging from veil of clouds (intro)
- FULL SHOT, Side View – jumping off bluff of clouds (end)

Mind View:

- CLOSE SHOTS, Front View – avatar's head/ neck
 1. Net of Brows/ Forehead Images
 - a. brows neutral -> brows knit (angry, confused, repulsed, bitter, frustrated)
 - b. brows neutral -> brows raised (surprised, happy)
 - c. brows neutral -> brows knit & raised
 - d. brows neutral -> brows angled up (sad)
 - e. brows neutral -> brows angled up & raised (worried, fearful)
 - f. brows knit -> brows raised
 - g. brows knit -> brows knit & raised
 - h. brows knit -> brows angled up
 - i. brows knit -> brows angled up & raised
 - j. brows raised -> brows knit & raised
 - k. brows raised -> brows angled up
 - l. brows raised -> brows angled up & raised

- m. brows knit & raised -> brows angled up
- n. brows knit & raised -> brows angled up & raised
- o. brows angled up -> brows angled up & raised

2. Eye Sequence

- a. eyes wide open (happy, surprised) -> eyes neutral -> eyes glazed over (bored, depressed)

3. Net of Mouth/ Chin/ Nose/ Cheeks Images

- a. mouth neutral -> full beaming smile (happy, excited, proud)
- b. mouth neutral -> mouth narrow & open (surprised, confused, worried)
- c. mouth neutral -> mouth frowning (sad, angry, repulsed, bitter, depressed)

Free-writing Form:

The free-writing form appears before users enter the mind-world of the avatar. Users type their current thoughts (10 to 50 words) inside a cloud-form that fills most of the screen. Directions are provided in small print.

Words:

The words that occupy the cloud stream beneath the avatar's mind bubble are retrieved remotely from the following online database:

http://research.parsons.edu/ia-fall2006/ian/final/show_words.cfm

The system begins with a default core set of words (about 500) that includes:

- *Practical* or *useful* words that define the avatar's identity and material progress in the game (ie: jobs, possessions, life structures, names, people, etc.)
- *Emotionally inflected* words (positive or negative)
- Prepositions, articles, pronouns, adverbs, simple verbs, and other non-meaningful parts of speech that connect the meaningful words together to form coherent sentences or phrases

The core set of words themselves and the life categories under which they are catalogued are devised by the creator. The particular emotions in which the words are associated are derived from survey tests conducted by the creator on a handful of different participants.

A core set of *complete thoughts* constructed from the core set of words is devised by the creator and stored in its own table in the database.

Many *new words* (comprising *new thoughts*) may be added to the database from various users' free-writing forms (see above). Their properties are determined by the core words that they match in the database (See INTERACTION).

Periods, used to mark the completion of a thought, also occupy the cloud stream in varying numbers.

INTERACTION:

Number of Users:

Anywhere from 1 to the maximum number of users allowed by the Flash Communication Server may engage in the experience simultaneously.

Entering:

Users enter the game without logging or signing in. (There is not any need to track individual identities or progress).

The Free-writing Form: [currently under revision]

Every time a user goes to the *Life Sentence*. Web Site, he/ she is presented with a short form to fill out before being allowed to enter the mind-world of the avatar. Once this requirement is met, an "Enter" button appears for the user to click. Clicking it submits the data and brings the user into the main hub of the game.

Upon receiving the data, the system analyzes the text entered by the user in an attempt to assimilate it into the system and have it function within the game in a logical and meaningful way.

The user is asked to candidly provide his or her current thoughts (10-50 words). This is a very general and open-ended exercise.

These are the steps that the system follows in analyzing the user's text:

1. The text is examined one sentence at a time by checking for periods.
2. Each sentence is analyzed word for word, ignoring capital letters:
 - i. The system checks for slang words and phrases against a special list in the database. If a match is found, the slang

word(s) are added to the regular word list from which they can be placed in the cloud stream during the game.

- ii. If the sentence perfectly matches, word for word, a sentence already contained in the database, its frequency count is increased by 1.
- iii. If any individual word matches a word already in the database, the system proceeds to the next word.
- iv. If a word is not recognized by the system, its synonyms are retrieved from an XML version of *The New Oxford English Thesaurus*:

- If any synonym matches a word currently in the database that is designated as “matchable”, the system automatically adds the user’s word to the database, mapping the new word to the same emotion(s) and category(ies) as the matching word.
- If any additional words (up to 5) in the definition are found to match words designated as matchable in the database, those additional words take on the associated emotions and categories of their matching words as well.
 - a. If the number of positive matching words is greater than the number of negative matching words, the new word is designated as positive and vice versa. If positive and negative matches are equal, it is designated as “mixed”.
- In order for the whole sentence to be added to the list of complete thoughts in the database:
 1. At least one word in the sentence must already have or acquire a positive, negative, or mixed designation.
 2. All words in the sentence must be recognized by the system, either by matching a word through its synonym or by itself. (Only words that make up complete thoughts will appear in the cloud stream).

- Case Scenario 1:

User text: “My brother is really obnoxious sometimes”

Slang check: no matching slang phrases or words

The system analyzes each word as follows:

my: already in database

brother: look up syn -> *friend* (not matchable)
is: already in database
really: already in database
obnoxious: look up syn -> *annoying*, *nasty* -> add word to database (negative)
sometimes: already in database

This sentence does not get added to the list of complete thoughts in the database.

- Case Scenario 2:

User text: "I don't know if my car will be fixed soon"
Slang check: no matching slang phrases or words

The system analyzes each word as follows:

I: already in database
don't: already in database (negative)
know: already in database
if: already in database
my: already in database
car: already in database
will: already in database
be: already in database
fixed: already in database
soon: already in database

This sentence gets added to the database.

- Case Scenario 3:

User text: "The world is going to pot"
Slang check: "to pot" (negative) -> add to regular word list

The system analyzes each word as follows:

the: already in database
world: already in database
is: already in database
going: already in database

This sentence gets added to the database.

The Beginning:

In the beginning, before any users have tampered with the system, the avatar is born with an adult body in a state of innocent emptiness – a blank slate. He emerges from a mist to occupy a blanket of clouds amidst a big blue sky. The avatar's expression in mindview is neutral. When the avatar dies and reincarnates, he reverts to this state.

The cloud stream consists of words from the category "initial". There are not any positive or negative words to start, only a few "useful" thoughts to get users started in creating a life for the avatar.

Forming Thoughts:

Every time the avatar is born (or reborn), his mind bubble starts out empty.

A user forms a thought in the mind bubble by choosing from the collection of words currently visible in the cloud stream. (The number and types of words available vary at different points in the game depending on users' choices). Some words may be off screen at any given moment.

The user must click on one word at a time without dragging. One release of the mouse sends the word into the mind bubble. The words line up one after another in the order that they are clicked, forming a string of text.

Overlapping Words:

Words may frequently overlap in the cloud stream. A user can move a word aside to access one underneath by clicking and dragging it to another location in the cloud stream.

Guide to Creating Coherent Thoughts:

Though the user is free to combine words in any way he or she prefers when forming a thought, the user is encouraged to form sentences that currently exist among the list of complete sentences in the database. Words that follow previously entered words according to these recognized sentences are highlighted for the user each step of the way.

Completing a Thought:

A user may enter up to 3 lines of text in the mind bubble. The user marks the completion of a thought by adding a period to the end of the string or block of text. This may be done at any point once the first word has been entered.

Once a thought has been completed, adding a new word clears the mind bubble and begins a new thought.

Role of the Computer:

Under the timer scenario (remains to be tested), the user initially has 5 seconds to complete a thought before the computer automatically completes it for the user. After the first two words, an additional second is allotted for each additional word entered.

The user may find a period and decide to end the thought after the first word. However, periods appear more frequently (grow in number in the cloud stream) when more words are entered in the mind bubble.

When the time limit expires and the thought has not been completed, the computer randomly selects words that follow the sentence-formation guide and finishes the thought by adding a period. However, if the words entered by the users up until this point do not match the beginning of any of the complete thoughts stored in the database, the computer wipes away the words that do not match and proceeds to finish the thought from this point instead.

The timer will be subtly indicated visually by a color change in the mind bubble or in the words themselves.

Multiple Users:

- Scenario 1 (to be tested): Each user has his/ her own mind bubble and enters thoughts independently of other users. The user cannot see the thoughts that other users are entering.
- Scenario 2 (to be tested): Users share the same mind bubble and must work together to form each thought.

Outcomes of Thoughts:

When a thought is completed, the computer analyzes the string of text in the mind bubble, looking at each individual word and checking to see if maps to a specific effect.

In the end, the thought either has no effect at all (this occasionally happens when the sentence or phrase is lacking either a positive or negative word or a

meaningful use of a practical [useful] word), or it has an immediate and perceivable effect on the system in one or more of several key areas:

The Emotional State of the Avatar:

If a word in the completed thought has one or more emotions associated with it in the database, the facial changes associated with those emotions are applied to the close-up of the avatar, one by one. With each facial change, movement is shown in the shift from one expression toward another.

When a facial change is applied, the nets of images that comprise each of three facial components (brows/ forehead, eyes, and mouth/chin/cheeks) each move along a path toward the image designated as representing the epitomes of the associated emotion. Each emotion associated with a given word has a score (1-10) that is equal to the number of images in which to cycle through in moving toward a new derivative facial expression. The emotion with the highest score is always applied last.

The total cumulative score for every emotion in the database is calculated after each completed thought by adding together its scores from all previous thoughts. The current (predominant) emotion is deemed to be the one with the highest total score.

Example:

Total score for *depressed*: 20

Total score for *angry*: 18

Total score for *annoyed*: 7

Avatar's current (predominant) emotion: *depressed*

Completed thought: "I *hate* my life"

hate:

associated emotions: *angry* (8), *annoyed* (6), *depressed* (4)

Facial changes get applied as follows:

annoyed:

- brows/ forehead: current to *brows knit* (6 frames)

depressed:

- brows/ forehead: current to *brows angled up (moderate)* (4 frames)
- eyes: current to *eyes glazed over* (4 frames)
- mouth/chin/cheeks: current to *full frown* (4 frames)

angry:

- brows/ forehead: current to *brows knit* (8 frames)
- mouth/chin/cheeks: current to *mouth frowning* (8 frames)

Total score for *depressed*: 24

Total score for *angry*: 26

Total score for *annoyed*: 13

Avatar's new current emotion: *angry*

All positive or negative facial expressions gradually return to neutral when not supported by positive or negative thoughts.

- By default, every 20 seconds, all pieces of the avatar's facial expression move toward neutral by 1 frame. Total scores for all emotions above 0 are reduced by 1 as well.

The Words Available in the Cloud Stream:

Words in the cloud stream change frequently in response to a completed thought. A completed thought in and of itself may link to a set of new thoughts in the database, or individual words in the completed thought may introduce a new set of thoughts.

- *Positive or negative words:*
A word in the completed thought that has one or more associated emotions, either positive or negative, will cause a certain number of new random thoughts containing words with the same associated emotions and from the same life categories to enter the cloud stream. (The thoughts are always broken up into their individual words) The number of new thoughts added is equal to the highest of the scores for all associated emotions.

For negative words:

1. The number of thoughts containing positive words in the cloud stream decreases by 1
2. The number of useful thoughts decreases by 1

For positive words:

1. The number of thoughts containing negative words in the cloud stream decreases by 1
2. The number of useful thoughts decreases by 1

- *Useful thoughts:*

“Useful” thoughts are devised by the creator alone and help the avatar get something practical accomplished, whether it be buying food, finding a job, getting married, or something else. If a completed thought is designated as useful in the database, it will have one of two effects:

7. If practical requirements for manifesting the desired goal or action are met, it will happen in the worldview (see *The Life of the Avatar*)
8. If practical requirements are not met or more thinking is required, a new set of useful thoughts associated with the completed thought in the database will be added to the cloud stream to guide the user in getting the goal accomplished. These new thoughts in turn may link to their own set of useful thoughts.

The exact type of new thoughts that are linked to a particular useful thought may change depending on the current state of several variables such as the avatar’s education.

Example 1:

Completed thought: “*I need a job*”

Avatar’s education: high school/ equivalent

New useful thoughts:

“*I will work in a store*”, “*I will work in a plant*”, “*I will work in a restaurant*”, etc.

Completed thought: “*I will work in a restaurant*”

New useful thoughts:

“*I will work in a diner*”, “*I will work in a fast food joint*”, “*I will work in a steakhouse*”, etc.

Example 2:

Completed thought: “*I want a house*”

Avatar’s job: none

New useful thoughts:

“*I need money*”, “*I need a job*”, etc.

* If a particular life structure, type of person, or possession (ie: car, job, wife) has not yet been acquired or manifested (see *The Life of the Avatar*), its use will be disabled in all instances other than in those useful thoughts in which the user needs or desires it.

The Life of the Avatar (Worldview):

Both positive/ negative words and useful thoughts have tangible effects on the life of the avatar.

- *Useful thoughts:*
If practical requirements for manifesting a goal or life action are met, as indicated for a particular such thought in the database, it will be manifested.

Users may manifest the following in this game:

1. a name (an identity for the avatar)
2. food (grocery store or restaurant; job required; quality depends on job)
3. an education (college/university or trade school; various degrees)
4. a job (store, factory, restaurant, specialty building, office building, house; various positions; quality depends on education, emotional state during interview, and luck)
5. a house (job required; quality depends on job)
6. a girlfriend
7. a wife (girlfriend required)
8. child(ren) (wife or girlfriend required)
9. a car (job required; quality depends on job)
10. a social life (bar, club, or lounge)
11. exercise/ sports activity (gym/ recreation center; job required)

The system keeps track of each of these items as separate variables in the database.

- *Positive or negative thoughts:*

Emotionally inflected thoughts determine the emotional nature of audio segments. Audio segments, which represent pivotal or quintessential moments of the avatar's experience, play whenever the avatar is inside a life structure.

Each audio segment is built dynamically from two or more audio clips, one or more containing atmospheric sounds, and one or more containing voice-overs. Each audio clip in the database has one or more associated emotions as well as a corresponding life category.

Some clips contain voice-overs that are specific and discernable, providing critical information on the avatar's progress. Others are abstracted and experiential, giving a subjective idea about a situation. (See *Audio Clips*)

Each clip that goes into constructing a segment is individually selected at random based on the current distribution of total scores for each emotion in the database. The emotions that rank highest are most likely to be reflected somewhere in the audio segment.

Impact of Life Situations and Events:

New People:

Certain events, such as a marriage proposal, a car being stolen, or a divorce cause specific audio clips containing the persons in question, or specific life structures, to be eliminated (at least temporarily) from the game.

The Avatar's Emotional State:

The avatar's emotional state is not only affected by thoughts themselves, but also by life events and experiences that take place inside life structures. All emotions associated with the current audio segment apply their corresponding facial changes to the avatar's face according to their respective scores. (As with positive or negative words, each audio clip has one or more associated emotions associated with it as well as individual scores for each emotion).

Words in the Cloud Stream:

With the start of each audio segment, a number of new random thoughts from the same life category and containing words with the same associated emotions as the audio segment's clips are added to the cloud stream. The number of new thoughts added is equal to the highest of the scores for all of the associated emotions.

Progression of the Avatar:

The avatar moves from one life structure to another in a horizontal, linear fashion. He enters each location, absorbing and/or engaging in the experience

there, and then leaves that location to go to the next one. When inside a life structure, the long view changes to a closer shot of the life structure.

Manifesting a car helps the avatar move from one place to another more quickly, but introduces a greater challenge: he has less time to neutralize any negative emotions he might be carrying.

The avatar visits life structures according to the following logic/ schedule:

- Morning:
 1. if avatar has job, avatar goes to workplace
 2. if avatar attends school full-time, avatar goes to school
 3. if avatar does not have job or full-time school:
 - a. avatar goes to gym (if gym exists)
 - b. avatar goes to food store (if food store and house exist)
 - c. avatar stays in house (if house exists)
 - d. avatar stays in car (if car exists but not house)
 - e. avatar stands and does nothing

- Midday:
 1. If avatar has job, avatar goes to restaurant (if restaurant exists)
 2. If avatar attends school full-time, avatar goes to restaurant (if restaurant exists)
 3. If avatar does not have job or full-time school:
 - a. avatar goes to house (if house exists) or goes to restaurant (if restaurant exists)

- Afternoon:
 3. if avatar has job, avatar goes to workplace
 4. if avatar attends school full-time, avatar goes to school
 5. if avatar does not have job or full-time school:
 - a. avatar shops in a store (if a non-food store exists)
 - b. avatar goes to part-time school (if it exists)
 - c. avatar stays in house (if house exists)
 - d. avatar stays in car (if car exists but not house)
 - e. avatar stands and does nothing

- Evening:
 1. avatar goes to house (if house exists)
 2. avatar goes to bar (if bar exists)
 3. avatar goes to restaurant (if restaurant exists)
 4. avatar goes to food store (if house exists and food store has not been visited)
 5. avatar goes to gym (if gym has not been visited)
 6. avatar goes to part-time school (if it exists)

7. avatar goes to car (if car exists but not house)
8. avatar stands and does nothing

- Late evening to Early morning:
 1. avatar stays in house (if house exists)
 2. avatar stays in car (if car exists but not house)
 3. avatar stands and does nothing

Time:

The passage of time in the *World View* is marked by ten-minute day cycles during which the brightness of day turns into the darkness of night.

Downtime:

When there are not any users engaged in the mind-world of the avatar, the system goes to “sleep”, keeping all variables constant until a user enters again.

“The End”:

The body of the avatar does not age during the course of the game. His life continues to evolve and change under all circumstances except for one:

When all of the words in the cloud stream turn negative (all positive and useful words have vanished), the avatar ends his life by throwing himself off the edge of a bluff of clouds into a sea of blue. At this point, the system reverts to the empty state in which it began. All variables are reset to their defaults.

Obituaries:

ALTERNATE TITLES:

The World I Know
Mindscape
State of the Mind
Mindform
The American Dream
LifeBuilder
Thoughtform

RELATED GAMES:

The Sims
Mad Libs