

# The Sims Design Document

Draft 5 – 8/31/98

Note to reader: the information here is for the use of The Sims development team. Sections that are decided and can be considered complete are in **bold**; other sections that are under discussion, or have competing opinions, or will be discussed at a later time in the milestone timeline, are normal font.

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## Live Mode - People

### Control Panel UI

To be designed by Sept 30

## In the World UI

To be designed by Sept 30

### Motives

#### SOCIAL

Romance note on 8/6: The July milestone implemented much of current Romance design. The success of that design is again under discussion. We will review Romance again when we design the story using character skills set in scenarios. This section has been un-bolded because it is returned to open, undecided status.

#### Romance in Social Motive

Romance occupies the high end of the social motive scale, from +70 to +100. In the social motive, regular and romantic interactions accrue social points ONLY to +69. To go to +70 and beyond, it takes romantic interactions. The social motive bar should reflect the “romantic territory” by appearing a different color. It is not possible for a character to move above +70 with another character unless they are “in romance”.

Note that the social motive will often be well below +70 and all interactions (social and romantic) will boost it up. However it is only romantic ones that can boost it up over +70.

#### Romance in the World UI

Immediately after any type of social interaction between two characters finishes, there will be either a friendship or romance icon that will pop up over the heads of the characters. (all social interactions are categorized as Romance or Friendship.) The friendship icon is TBD but the romance icon is a heart.

There will be a + or – sign to the right of the heart and friendship icon to indicate the direction of movement of the latest interaction. We will drop the flashing icons that are currently implemented because they don’t work well. If the = or – doesn’t work, we can try the happy-neutral-sad face Will has recommended.

#### Romance in Relationships

Romance between characters can occur if the relationship between them is  $> +50$ . It is at this point that the menu items begin to include romantic interactions.

Relationships can be romantic one-way and two-way (of course). One character may reach a  $> +50$  relationship and may initiate a romantic interaction without the other character up to the same level. In fact, it is this difference in relationship values that will make it interesting to watch because a romantic interaction may be reciprocated OR may be flatly refused. If a refusal or rejection drives the initiating character’s

relationship with the refuser to plummet, there will be no more opportunity for romance until the relationship value is boosted up again to >+50.

Relationship scores can go to the max (+100) with or without a romance between characters, thereby reflecting the difference between best friends and lovers. The relationship panel reflects the state of the relationship.

### Same Sex and Opposite Sex relationships

To be outlined in 9/30 Live Mode deliverable.

Currently the game only allows heterosexual romance. This will not be the only type available – it just reflects the early stages of implementation. Will is reviewing the code and will make recommendations for how to implement homosexual romance as well.

### The Romantic Benefit

There is a strong benefit to having romantic interactions because every point above +70 is added to the mood score. Since the mood score is an average of all the motive scores, the addition of the straight romance points is a BIG WIN.

The same color that indicates “romantic territory” in the social motive bar should indicate the mood points attributed from romance. (We’ll try this and see if it works. It may be too hard to tell the effect of an individual interaction on the motives since they are simultaneously being controlled by other effects too)

When a romantic interaction causes an increase in the social motive, the amount of that increase is added to the mood score, but only when the social motive exceeds 70.0, and only to the extent that the increase increased the score over 70.0. For example, an increase of 10 points from 62 to 72 would only add 2 points to mood, but an increase from 73 to 83 would add 10 points to mood).

### Relationship Panel

The relationship panel should be changed in the following ways because player testers do not understand the colored backgrounds behind the heads. So:  
The heads will have a small “gas gauge” type rectangular bar under each of them. This will fill up as the relationship gets better and will go down when the relationship score decreases.

There will be a heart outline that will encircle the head when there is a romance going on with that character. We have dropped the idea of the thickness of the heart outline changing due to size constraints. Charles, maybe we use small hearts in the gas gauge: the more romance the greater the number of hearts?

TBD Design There is an anticipated problem of how to display the flip from declining romance into friendship when the relationship points are high. Does the friendship icon display after interaction, in the middle of interaction, or what?

## Live mode Art Notes

### 3D Animation

- There will be one skeleton model for all adult characters
- Child-sized skeletons are under discussion as a result of meetings with Pet Fly Productions and Ron Cobb
- There will be ?? number of skins
- Naked skins are required – each character will have one set of clothing, one naked set. Each character has only one set of clothing and hair style to maintain consistency and make it easier for the player to recognize individual characters.
- Bathing suits/underwear under discussion
  
- Upper and lower body scheme?  
The current art plan calls for two complete sets of animations where we will need sitting and standing versions.

### Sprites

- Some animated (duck) others not (baby)

## Design-a-Family Feature

### Design

- **Will be included in game**, particulars of interface and if applicable to story are TBD.

### Simulation

- Designer family members can act as neighbors, but will not be used in level play.

## People at Work

- **Newspaper/job will be included in game.**
- Carpool with vehicle outside to pick up character is TBD

## People Voiceover

Several experiments (using Freshness tool for speech) and discussions with EAC sound department (to provide tools to support real language) have proven that we will have to use our fallback option of unintelligible speech or an obscure language for character language.

The possibilities here are to use:

- An obscure language (like Navajo or Esperanto) for entire “script”
- Use a more scripted and directed version of Charlie Brown speak than we were able to provide in June milestone.
- Other possible languages: West African (Nigeria) or Bahasa Indonesian.

Will favors using four voices: adult male and female and child male and female.

We can explore using pitch shifts or other tricks to try to expand the voices to be different for each character but this is not expected to be successful. Rather, the personality of the character will determine the “sound bites” that they will tend to say more often i.e. a happy person will make happier sounds and a grumpier person will make grumpier sounds.

## Control Panel –

The Control Panel consists of 4 main sections: the View Controls, The Game Controls and the general and specific mode tools. The game controls and view controls are common to all modes. The mode tools change by mode.

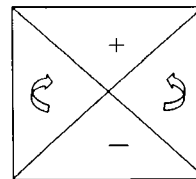
Dimensions of CP are: 100 pixels high by 800 pixels in 800 x 600 resolution and 100 x 1024 pixels in 1024 x 768 resolution.

### Mouse activation

In all the Control Panel buttons, the action is always taken on mouse down.

### View Controls

- zoom in
- zoom out
- rotate world 90 degrees right
- rotate 90 degrees left.

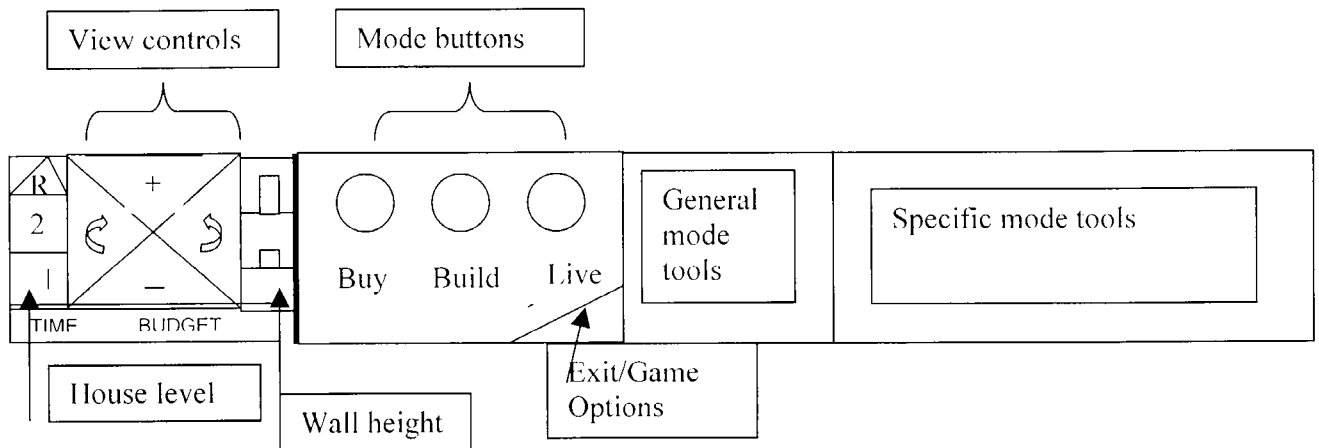


The View controls need to indicate states: selected, unselected, rollover. An additional state, temporarily unselectable for zoom in and zoom out. Zoom in is temporarily unselectable when game is in largest zoom; conversely, zoom out is temporarily unselectable when game is in farthest zoom.

## Game Controls

- Time
- Budget
- Wall Level
- House level
- Mode buttons: Buy, Build, Live, Game Options (this mode is smaller and less important visually than the others but it does include EXIT)

Button states discussed in each section below.



### Time

**Time** is a readout of the game time. It is also a button that accesses the **Speed Control** in the game. A rollover highlight on **Time** indicates something else is there and that is **Speed Control** (so sorry for the awkward language!). When the **Time** button is pressed, SFX plays, the text "Time" highlights and takes over the **Budget** space next to it. In the **Budget** space the speed control is displayed with a slider. Slider has 5 positions to set game speed from slow to fast. 3 would be real time, 4-5 is fast. 1-2 is slow time. The game cannot be paused here. The slider can be clicked and dragged across the five positions but it will also move along the scale if the player clicks inside, at either end of the slider box. It moves in the direction of the clicked cursor by one click at a time.

Click anywhere on CP or in the World to dismiss the **Speed Control**. Also dismissed by just moving out of **Control Panel** into **World** (no selection necessary).

**Keyboard shortcuts** – only work in **Live mode**.

P = pause

1 - 5 = game speed settings

### Pause

Game is paused automatically in **Build** and **Buy** mode. Game can also be paused by hitting the **P** key. Hitting it again unpauses the game. When the game is

paused for any reason, there will be a red box outline with a diagonal line drawn through it that will sit over the Time button. The button will still be active and will bring up the Speed slider. The speed can be modified in any mode, except that the results will only be visible in Live mode when the people are moving.

Pause will also be indicated with the text "Paused" displaying over the World (in Live Mode only).

#### ART

The Time button needs a regular and a rollover state. It also needs a "pause" state with the red box and diagonal over it.

#### Budget

Budget is readout only and displays the amount of money in the household account. Budget can never be negative. It is displayed with commas and 8 digits for a total of 10 characters.

In the section, Selling an object, the Budget amount displays a highlight. But for the purpose of CP functionality only, Budget is readout only.

#### Walls, Mode and House level

The following controls need to display three states: Wall level, Mode buttons and house level. Their states can be unselected, selected, or rollover-highlight. In addition, Walls (no wall and cutaway) and House level (2<sup>nd</sup> floor) also each require a temporarily unselectable state. They will be unselectable in the following conditions: roof view in any mode allows no walls other than high walls and house level 2<sup>nd</sup> floor cannot be available in Live mode if there is only one level.

For example, in Build mode when roof mode is selected, high walls only are displayed. Cutaway and no walls are temporarily unselectable.

In another example, if no 2<sup>nd</sup> floor has been built, go to Live mode, people live on 1<sup>st</sup> floor, so 2<sup>nd</sup> floor icon on CP is temporarily unselectable. If player then goes to Build mode, 2<sup>nd</sup> floor icon is now selectable, and 2<sup>nd</sup> floor is ready to be built.

Walls display three states available for selection: no wall, cutaway walls, high walls. Default position is cutaway walls. Only the walls of the current level are effected by the wall selection. Walls on the lower level are drawn at full height.

House Level also has three states available: first floor, second floor, roof. Default is first floor level. Keyboard shortcut is TAB key.



## The Look

The overall style will be in accordance with Charles's international iconic style.

The common non-mode specific items in the control panel will all be placed in two blocks, of approximately equal size, starting at the left end of the control panel. Mode specific items will be placed in two blocks in the center and right sides of the control panel.

## General - In the World UI

The view controls can be displayed in the World by clicking the right mouse button when cursor is in the World. One exception to this rule is when the mouse is held down for rotating an object (see Rotating an Object), it is not possible to also click right mouse for in the World view controls.

The view controls purposely look very similar to the CP so that the player does not have to learn yet another interface element. But, they operate slightly differently than in the CP. In the world, they first center on the cursor point. This is okay as implemented. But there needs to be a change to the way the view controls are currently implemented, specifically, the zoom in and zoom out should have a state of temporarily unselectable, discussed in View Controls section. The rotate navigation should rotate around the center of the screen. Zoom in and zoom out should zoom to cursor location.

## Memory in Modes

Each mode (Buy, Build and Live) will remember the tool/room/function submenu the player was using prior to switching modes. For example, if a player has been using the wall tool and then switches to Buy Mode, when he returns to Build mode, the wall tool and its submenu is selected. The memory will not go so far as to remember the slide-up info panel that could have been up for any particular tool. It also does not remember global view controls like zoom, rotation and level.

## Mode-Specific Tool Info

Each mode has tool info. For a description of this feature, see the section Object Info Panel in Buy Mode.

## Buy Mode - Objects

### Vocabulary:

Control Panel (CP) is all buttons, text, etc below the Control Panel top line.

The World is the entire simulation area above the Control panel.

Catalog Subtools are the specific objects to buy (i.e Green Chair, Red Chair).

General Mode Tools are Functions (Seating, etc.) or Room (Kitchen, etc.)

**Please refer to the Object List (Word and Excel files) on Elmo for specifics on each object.**

### **Control panel UI**

**Buy Mode is the section of the game where the player purchases and places objects into the house/environment. The player is limited by the money in his household budget. During Buy Mode, the simulator pauses and time does not pass. There is no penalty for staying in Buy Mode for any period of time. All objects are sorted in two ways: by Room and by Function. Moving between Room and Function Sort is described in the next section. The Open hand cursor is the default cursor in the world. It is possible to simply move objects around and not buy anything in BUY mode.**

### **ART NOTES**

**The size of the Control panel objects are assumed to fit in a 45 x 45 pixel square. This assumes a fit within the trimmed down 100 pixel Control Panel that runs on the bottom of screen. These numbers are estimates and will be altered during Charles' layout of CP.**

**The Objects should appear with no shadows in CP.**

**The objects displayed in the UI will be a separate set of graphics tailored to fit the size of the UI CP space. (45 x 45 is estimate.)**

### **Selecting Buy Mode and the BUY sort**

**Click on the BUY button. The Function sort is the default sort. Function icons display to the right of the mode buttons. The function default will be the upper left function icon. There will be no object catalog default selection. The default cursor is the open hand cursor.**

**Clicking on the BUY button again while in Buy mode switches the sort to the Room sort. The upper left room icon will be the default and again, there is no catalog object default.**

**NOTE: the Room sort is supposed to be hidden. It is not necessary for game playability and therefore does not deserve extra room on the interface. It is a surprise that the player can find on their own.**

**The room icons and function icons act as buttons to call up that room's specific objects. The original idea of using text for room and function sort has now been dropped and the icons Charles has designed are accepted. (Particularly since**

Tooltips are now implemented, the text label on the permanent UI is not needed.)

Room categories are Bedroom, Dining, Bathroom, Study, Kitchen, Miscellaneous, Family Room, Outdoor.

Functional categories are Seating, Surfaces, Appliances, Electronics, Plumbing, Decorative, Lighting, Miscellaneous.

Since Miscellaneous appears in both Room and Function, but have different objects in their catalog, a visual treatment has been devised. The ... ellipsis with closed dots will be used for the Room sort. Open dot ellipsis will be used for Function sort.

When player leaves Buy Mode to visit Build or Live Mode, then returns to Buy Mode the last sort is displayed, and the last selected general mode button is highlighted (i.e. Seating would be highlighted, but not Green Chair from catalog.) Since the Info Panel closes with the selection of another mode, that Panel will never be displayed on return to Buy Mode.

### **Selecting a Room or Function**

Rolling over the room icon (substitute “function” for “room” throughout – for the function description) will highlight the icon. Mouse down on the room icon will select the room and the icon will assume the "selected" color. A double row of objects appears to the right of the room icons. At the rightmost end of the row, there will be an arrow displayed only if there are more objects to be viewed. Mouse down on the arrow will bring up another two-row set of objects in the same layout or as much of a row as is needed. Objects do not scroll one at a time. Object sets are motored into catalog space to help players remember on which “page” a particular object is found.

There will be an arrow on the left side to allow the player to get back to the previous set. The price of the object will appear as a hot label when the cursor rolls over the object; no object name (i.e. “Antique Mahogany Table”) is displayed, only price. The price hot label may not obscure its object, but can obscure any other neighboring objects.

### **Selecting an Object to Buy**

To select an object to buy, click its graphic on the catalog area of the Control Panel. Object is selected on mouse down. There is one way to move it into the world that will be supported:

Click-release to select and pick up, move-into-world, click to drop.

Drag and drop is not supported in Buy Mode. The scheme for rotating an object in the World precludes the use of drag and drop.

Once an object is selected, the cursor changes to a grabbed hand holding a smallest zoom size version of the object. As soon as the cursor+object moves into the world, the object in the cursor changes to match the zoom level of the world and becomes monochromatic (gray scale). There will be two versions of gray-scale to indicate whether an object is over a valid location and can be placed. Darker gray-scale indicates an invalid location while brighter gray-scale indicates a valid location. As soon as an object is placed, it becomes full color.

If selected object is moved over View and Navigation controls, object disappears and turns to arrow cursor. As soon as arrow slides back to Mode or catalog area, selected object reappears.

### **Buying**

To buy an object, place it in the world. This is the only way to buy an object -- selecting the object from Control Panel does NOT purchase the object. **THE OBJECT IS BOUGHT WHEN IT IS SET DOWN.** The budget is decreased by the price of the object when the object is placed. The object becomes full color when it is bought /placed in the world.

When an object is placed, ka-ching SFX plays, budget amount readout highlights displaying first the current budget amount in bold, then the new decreased amount in bold, then goes back to unhighlighted, unbolded state.

### **Spending Beyond your Means**

You cannot place an object that you cannot afford. If the object costs more than is in the budget, the price in the hot label will appear in red and the object picture in the info panel will have a red band or some other indication over it that the object can't be bought. In fact, player cannot select an object to place if funds are too low. The cursor will not change to a grab hand with object if funds are too low.

### **Buying Multiples of the Same Object**

To buy more of the same object without having to go back to the CP and choose it, hold down the Shift key while placing the object. Another identical object will be attached to the cursor.

If bank account is too low to buy the additional object, player will be prevented from getting another object on cursor, and can't-do-that SFX plays. Open hand cursor displays (empty-handed!)

### **Slide up Info Panel**

When player selects (with a mouse down and up) on an object in the CP catalog, an info panel will slide up if the mouse remains over the catalog object for 1 second without moving (timing to be playtested.) This panel will display the price, and medium zoom level size of the object with a

short (less than 50 words, two sentences or less) text string with hints on the motive or other benefits of this object. This text string will reveal only some of the benefits the object provides – it is not meant to give total object information, nor should it be too specific (will not say “this aquarium will give +5 environment points.”) Some medium zoom objects may be too large to display on Object Info Panel. For these, the small zoom graphic will be used. The database will list which size object graphic to use in Info Panel.

The width of the Object Info Panel slides up above the catalog area of the CP objects.

Sliding over to adjacent object in catalog and clicking once on that object will replace the first batch of info on the Slide Up Info Panel with that second object’s medium zoom size graphic and text.

As soon as cursor crosses over from the Control Panel into World, or over the Object Info Panel, the info panel will slide down. It will slide down it leaves the catalog subtools area.

### **Returning Before Buying**

The player can return an object before buying it. Here is the sequence of actions:

Select object from UI CP by clicking once, grab hand cursor displays on object. Move up into the World, and without placing object in World, user can move the selected object back to any position over the CP to return (except over Navigation and View control where the arrow cursor is displayed). Click once and on mouse down object will be replaced (no dollar amount in bank account needs to change, since object is not bought until it is placed in World). It not necessary to put back exactly in it’s “home’ spot on the CP UI.

While the object is being moved around in World, its catalog CP equivalent retains its highlight until the object is placed, or the object is returned to the CP.

## **Objects in the World UI**

### **Selecting**

To select an object in the World, click on it with the open hand cursor. The selected object displays its monochrome state. The cursor becomes a grab hand holding the monochrome object. Now the object can be moved or rotated.

### **What can be selected in Buy mode?**

Objects that are bought in BUY mode can be selected. The open hand cursor can also select BUILD mode elements. BUY mode objects can be sold. BUILD mode objects can be deleted, not sold. The hand tool works identically in both modes. The only difference is that in BUY mode the hand is the default cursor in the world and in BUILD mode it must be selected from the CP.

### **Moving**

An object can be moved by:

Click to select from CP and pick up, move-around-in-World, click to drop.

Drag and drop is not supported (because of conflict with rotating scheme.)

To move an object already placed in the World screen, in open hand mode, click on the object to select it, it changes to its monochrome state, the cursor changes from open hand to grab hand, then move it to the desired location and click to set down. The grab hand cursor now changes back to an open hand cursor and the object returns to colored state.

Moving a selected object around the selected object on cursor to change monochrome state depending on whether it is a valid location to be placed. There will be two versions of gray-scale of the object to indicate a valid or invalid location. Darker gray-scale indicates an invalid location while brighter gray-scale indicates a valid location. As soon as an object is placed in a valid location, it becomes full color.

A technical test of this idea is necessary. Can program interpret object's RGB value to support light grayscale version and dark gray scale version? If possible, Will suggests we try this with a small object and a large object to see how well it reads.

If the object is clicked to set down in an invalid location, a text string displayed next to the object appears with brief explanation of why object cannot be placed in that particular spot. SFX will play and this text string will display on mouse down. There will be a set of six (or so) generic explanations for invalid placement. The text string displays for less than 5 seconds (timing will be tuned with playtesting) This is the same type of text string that is used in Build mode that indicates why a particular architectural element cannot be placed.

## Rotating

Thanks to Don, we have a rotating scheme that should work more easily than previous designs.

Select object in the World, on mouse down the grab hand cursor is displayed, and the object is in monochrome state. While still holding mouse button down, move away from selected object and slide cursor around. The selected object will be pinned in its original location and rotate, following the cursor. The rotate icon displays on cursor. On mouse up the rotated object is set down, changes to its colored state and open hand cursor displays.

If the object does not fit into the rotation place (i.e. a multitile object that needs space to rotate), object look in the immediate area (2-3 tiles around it) and move to the place that allows the rotation. If the large object needs more room than that, it will jump to the next legal rotation space.

Double clicking on an object does not rotate the object.

< > keys will also rotate selected object.

## Selling an Object

To get rid of any object that has been bought, the player must sell it. The longer the time between when the object is bought and sold, the higher the depreciation on it and the less the player can recoup of the original value. If an object is sold in the same Buy Mode period as it was bought (that is, the player has not switched to Build or Live Modes), the object loses no value upon resale. The depreciation schedule only takes place in Live Mode, and is calculated monthly, so it is possible for a player to buy an object, go to Live mode for less than a month, return to Buy mode, sell the object and get full value for it since its depreciation hadn't kicked in yet.

There are two ways to sell an object:

1. Select the object that has been placed in the World by clicking once. The object turns into its monochrome (selected) state. The grab hand appears over object. A new temporary button (alpha-blended?) appears over the room/function buttons in the CP that says "Sell this sofa for \$380?" Move the selected object to this temporary button and click to release. On mouse up the object is sold. No confirmation dialog is displayed. Dollar amount is added to bank account display. Budget highlights momentarily with new amount.

2. Select the object that has been placed in the World by clicking once. The object turns into its monochrome (selected) state. The grab hand

appears over object. A new temporary button (alpha-blended?) appears over the room/function buttons in the CP that says "Sell this sofa for \$380?" Hit the Delete key on keyboard. No confirmation dialog is displayed. Dollar amount is added to bank account display. Budget highlights momentarily with new amount.

When selected item is moved down across the line of CP and the world, it changes from its World size to the catalog object size.

If the selected object is not moved to the temporary Sell button, but crosses over into the Navigation and View Controls area of the CP, the cursor changes to an arrow. When it crosses back into Sell button area or catalog area, cursor changes to selected item.

Build mode objects are deleted, not sold, but they work exactly the same way with just a different message string (Delete this pool ladder?) in the alpha blended button.

## MISC NOTES

This design eliminates the following permanent interface buttons: Function, Move, Sell and Info. Move, Sell and Info interface replacements are discussed in above section.

The player in 1024x768 mode will be able to see the next extended set of objects without having to use arrow buttons. If there are still more objects to be displayed, the right arrow will appear on the extended CP.

## SFX - Buy Mode Control Panel

Sfx of "ka-ching" is played every time an object is bought. When selling object back by Delete key or by moving it back to CP, the addition of dollars back into account will play a different, money-related SFX. **Budget highlights momentarily with new amount.**

CP and in the World object SFX will be specified when all game interface issues are set.

## Build mode - Architecture

### Vocabulary:

Architectural Elements are all the structural building tools that cannot be moved, i.e. walls, floors, windows, doors, etc.

Architectural Objects are all the objects that can be picked up and moved (Fireplace, Staircase, Pool ladder, etc.)

Architectural Tools are the CP icons for all the Architectural Elements and Objects



## Control Panel UI

The Build CP will include the common View Controls and Game Controls shared by all modes. The Architectural Tools listed in the table below will be icons. They will appear in a block containing two rows of six tools. When the player clicks on any of them (except Hand), the specific tool choices in that category will appear in the catalog area. For each tool selected, the cursor will change. The Arch Tools will have names displayed in Tooltips.

### Architectural Tools on the Control Panel

Tool	Tool Choices	Cursor in world	Function	Shift + Cursor (Extended Function)
Terrain*	<ol style="list-style-type: none"> <li>Hill with up arrow</li> <li>Hill with down arrow</li> <li>Hill w/ horizontal arrow</li> </ol>	<ol style="list-style-type: none"> <li>Hill with up arrow</li> <li>Hill with down arrow</li> <li>Hill with horizontal arrow</li> </ol>	<ol style="list-style-type: none"> <li>terrain up</li> <li>dig</li> <li>level terrain</li> </ol>	Changes radius to smooth out or raise larger area
Water*	<ol style="list-style-type: none"> <li>Water drop with up arrow</li> <li>Water drop with down arrow</li> <li>Pool</li> <li>Diving board</li> <li>Pool ladder</li> <li>Pool filter</li> </ol>	<ol style="list-style-type: none"> <li>Drop with up arrow</li> <li>Drop with down arrow</li> <li>Pool in hand</li> <li>4-6. Floating object in grab hand</li> </ol>	<ol style="list-style-type: none"> <li>raises water level (only works on water)</li> <li>lowers water level</li> <li>Drag out a pool</li> <li>4-6. Place each object</li> </ol>	<ol style="list-style-type: none"> <li>None</li> <li>None</li> <li>None</li> <li>4-6. Place multiple pool objects</li> </ol>
Plants	<ol style="list-style-type: none"> <li>5 trees</li> <li>5 shrubs</li> <li>4 flowers</li> </ol>	Floating selected plant in grab hand	Place plant	Place multiple plant objects
Floor*	X flooring styles	Arrow	Place floor	Fill entire room with selected floor.
Wall*	<ol style="list-style-type: none"> <li>Wall - 1</li> <li>Fence &amp; - 7 Balustrade - 3</li> <li>Columns - 4</li> </ol>	<ol style="list-style-type: none"> <li>Pole (hammer removed)</li> <li>Small pole for fence/balustrad</li> <li>Floating column in grab hand</li> </ol>	<ol style="list-style-type: none"> <li>Drag out a room</li> <li>Drag out fence/balustra</li> <li>Place column</li> </ol>	<ol style="list-style-type: none"> <li>Drag out a wall only</li> <li>None</li> <li>None</li> </ol>
Door	X door styles	Floating selected door	Place door in a wall.	None

Window	X window styles	Floating selected window	Place window in a wall.	None
Wallpaper*	wallpaper styles (8 inside, 8 outside)	Looks like door frame until hits wall - then displays pattern	Place wallpaper on a wall.	Place wallpaper on all walls in the room.
Stairs	8 stair styles	Floating selected stair in a grab hand	Place stair	Place multiple stair objects
Fireplace	X fireplace styles	Floating selected fireplace in a grab hand	Place fireplace	Place multiple fireplace objects
Roof	5 roof styles: gable, dormier, shed, flat, pitched with 2 shingles styles each for 10 total.	None	Roof style applied automatically then pops house into outside view (roof).	None
Hand (Move Objects)	None	Cursor changes to open hand.	To move objects in the world.	None

**\*Have a running total. See Rollover Cost section below.**

**Please refer to the Object List on server for the latest numbers on object type. (i.e. “ what is current decision on number of stair types?”)**

**NOTE: the order of architectural tools in this table is not necessarily the order in which to display their graphic in the CP. Will will consult with Charles to finalize the order.**

### **Slide up Info Panel**

**In Build mode, the info text displayed on the slide up panel is on a tool-by-tool basis. Some of the Arch tool info will include how to use the tool, any CTL key functionality, or motive effects a tool or object might provide. Like the Object description, this Arch Info panel will be brief, 50 words or less.**

**Also, as in Build mode, the Info panel will slide up if the mouse rests in the catalog area for 1 second. The mouse can rest on any catalog object, not just the selected object. The Info panel will not slide up if the player has chosen a catalog object and immediately moved it into the World.**

### **Build mode Defaults**

**Upon first entering Build Mode, the following are the default view selections:**

- **First story**

- Cutaway walls

Upon returning to Build mode after having played and left it for another mode, the game will remember any submenus that were in use when Build mode was exited.

### Rollover Cost and Running Totals

Each tool will display a unit cost (but not the name of that catalog object) when rolled over in the catalog area of the control panel. Unit costs are expressed as single unit price (“\$25 ea”, not “\$25 per square foot”). Additionally, some tools will display a running total as part of the cursor when they are being stretched out in the World. These are marked with an \* in the Architectural Tools table above.

### Tool Tips

Each tool will display its name when the mouse rolls over and waits 1 second. (or whatever timing is speced in playtesting) Since Tooltips cannot be turned off, we will be sure to keep the Tooltips as brief as possible.

### Undo and Redo

These two buttons need to be added to the left of the general Build tools. The two current suggestions for look are:

1. Write them in vertical text
2. Make them icons like the undo/redo buttons in Word.

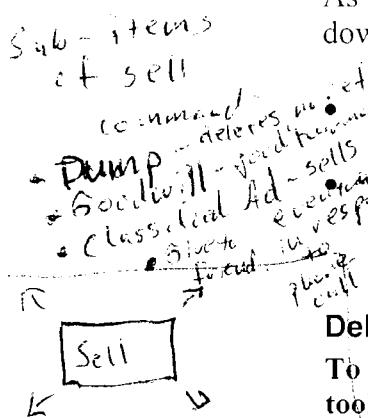
Charles needs to design when working on the entire layout.

### Rotating Architectural Objects

As in Buy mode, Architectural Objects must be selected and with mouse still down, can be rotated. There are a few exceptions:  
 • Pool ladder, diving board and filter can only be placed on a pool edge tile, so won't be rotated. Pool objects will snap to their legal pool edge place.  
 • Plants and trees will be symmetrical, so rotate is not necessary.

### Deleting Architectural Objects

To delete an architectural object in the game, select the Hand tool from Arch tools CP, click on the object in the World you wish to delete to select it, then hit the Delete key or move the object down into the Sell/delete button on the CP. In Build Mode you can delete architectural objects as well as all objects bought in Buy mode.



- Delete button - Highlights (enabled) when you are holding an item that can be deleted. Delete/Sell? Can add up & delete architecture in buy mode? Furniture in work mode? Consistency would be good here. Mild version of merging the Arch & Buy mode make them as similar as possible.

When mouse enters CP delete button zooms to cell

- Can move tool (head) in arch mode  
 move objects like windows & doors?  
 can delete them?

### Deleting Architectural Elements

- Moving windows & doors  
 seems unusual.

To delete an architectural element, the tool used to create it must be used. The following list describes the tools and their deletion dependencies:

#### Deleting Walls

Ctrl+wall tool deletes a wall or fence section and any doors or windows in them

- Dependencies: Walls cannot be deleted if they have anything hanging on them. Help message will display "cannot delete wall because there is an object on it."

can't move walls, must delete and re-draw to join naturally.

#### Deleting Doors

Ctrl+door tool deletes a door

- No dependencies

- can move door weight.  
 - could wall tool open door or window replace it with new wall?

#### Deleting Windows

Ctrl>window deletes a window

- No dependencies

- can move windows? weight.

#### Deleting Wallpaper

Ctrl+Wallpaper deletes a wallpaper section  
 Ctrl+Shift+Wallpaper deletes a whole room of wallpaper

- No dependencies
- Note: Removes down to the drywall

- can't move wallpaper.  
 seems naturally.

#### Deleting Floor

Ctrl+Floor deletes a floor tile  
 Ctrl+Shift+Floor deletes the floor in a room

- Dependencies: on first floor a floor tile can always be deleted down to the grass. On second floor a floor tile cannot be deleted if there is any object or architectural element on it. This does allow for hovering objects if all second floor tiles around the object-occupied floor are removed. When the second story floor is deleted, the second story grid is exposed.

- can't move floor? naturally.

#### Deleting Water

Ctrl+Water tool inverts the selected water tool — ? fill/drain?

- No dependencies
- Ctrl+Pool deletes entire pool

- No dependencies

- Do terrain-forming tools move water around? Gravity & conservation of H2O?

**Deleting Terrain**

Ctrl+Terrain tool

inverts the selected terrain tool - has no effect on Level Terrain tool

Ctrl+Shift+Terrain

Smooths a larger area

- **Dependencies:** the terrain cannot be raised or lowered if there is anything built on it or if any object rests on it, with a very few exceptions. The acceptable terrain type for objects will be specified as an object attribute in the object database. (ex: Architectural Trees can live on raised terrain tiles.)

How do terrain tools interact with water?

Locked tiles? Roots & sidewalks.

**Deleting staircase and fireplace**

Hand tool

deletes like all objects

- Move Staircase? fireplace? *yeah man.*
- impossible to move. *Placing stairs & fireplace knocks holes in floor, walls!*

All dependencies will have an error message that pops up to describe the error.

- non-model tool-tip following cursor? *Can't intersect wall.*

- May be several reasons why an object can't

**Roofing the House**

After the player selects a roof type and shingle set, the program will automatically roof any areas of the house that have a supporting structure. The roof does not have to be over a "room" but can appear over a single wall. It is possible to have multi-level roofs. If a supporting wall is removed, the roof disappears. Roofs have no impact on game play and they are free. They are visible in only two ways:

- when the player selects Roof view on the CP
- when the player views the house from the outside because a selected character has gone outside.

- How can you prevent cut from covering balcony?  
on outside floor places on 2nd floor?  
put walls around them?

Note: if a selected character has gone outside and behind the house so that he is obscured from the player, the cutaway wall function should cut away all walls in the house to reveal the character.

The algorithm which calculates the roof will run

- when a player chooses the Roof view in the View controls or
- the player leaves either Buy or Build mode.

In the second case, the values will be stored for later use.

If a player selects roof view and has not selected a roof and shingle type, the default will be the first choice in row one.

In roof view, the cutaway and no-wall views are inactive. Only full walls are seen. When player returns to other house level view, game reverts walls to previous selection.



Can place (a2) (6500!!) and walls as first problem. Order it rests for problems may be arbitrary what user expects, so we can only feed back out of several possible problem conditions, which may not be the most important one. Multi-tile objects magnify this problem.

## Second Stories

It is possible to build a second story on a house but a house can have no more than two levels plus a roof. In order to build a second story, a first story is necessary.

To build a second story over a first, click on the Level 2 icon in the view control. A grid will be drawn over the first floor over all areas that can support a second level. The grid will extend out one tile over the existing supporting structures although it is possible to build out up to two tiles from an existing support if the first tile out is floored. A supporting structure is a wall or column.

Any architectural elements that cannot be placed on a floor tile cannot be placed on the second floor, i.e. trees, plants, pool, etc. Stairways cannot be placed on the second floor either.

Deleting walls and columns on the first floor after building a second floor is allowed. If the supporting structure is removed, the second story will float. This will definitely create some very strange structures floating in air but it is felt that the alternative would require too much logic and animation.

→ Being able to "pick" the game into allowing unusual configurations (that don't crash) is

## Special Architectural Element/Object Rules

### Pool

The pool must be placed on flat terrain. The pool placement tool allows it to be stretched just like a floor. The pool can have a ladder, filter and diving board. These pool elements must be placed on a pool edge tile. The pool is only one water depth and it cannot be changed with the water tool.

Art note: The pool will be constructed of x number of edge tiles and 4 kinds of center tiles that can display up to four levels of scumminess.

People get into the pool via the diving board and get out via the ladder.

Without the right pool accessories, it is possible not to be able to get in the pool or not be able to get out.

The pool filter cleans pool scum. Scum is randomly distributed over the center pool tiles.

### Stairs

There are 8 types of stairs. They require 4 - 7 tiles (depending on stair type) on the first floor + one for the first floor clear spot in front of the staircase, and 1 floor tile on the second floor for a landing. The stairs are

*Handwritten notes:*  
"cannot be placed on side"  
Need to change definition of this bit and update code to behave the new way.

*Handwritten notes:*  
entertaining and an interesting topic for a tips & Easter eggs book.  
"Inside the Sims" - A Home with the Sims - I'd like to write a book "Inside" book!

*Handwritten notes:*  
- Bathing suits? Dressing/undressing?  
- Changing room? gateway.  
- Bedroom, Bathroom, "private" object in room like toilet, showers, tub, dresses, bed.  
Make others in room exit before doing private action.

open style-not a closed area beneath the stairs-but it is not possible to place anything below the stairs even though the area looks free. Also, the stairs erase the floor tiles above them (to leave room for the ascending heads of characters). The Floor Fill function will have to recognize that the area above the stairs is illegal and not fill it in.

*Stairs then walls.  
erase wall? (hard if there is a door)  
(Bad if it connects rooms).  
Search that.*

### Water

Water will have a simple hydrological model that will allow it to flow downhill. Will to design.

### Miscellaneous Architecture Issues

- Will advocates supporting the intellimouse input device in this way for Architecture Floor selection mode: each "click" of the intellimouse wheel will put up an Arch level. Starting on the first floor, click one will put up walls on the first floor, next click will put on floor of second floor, then second floor walls, then roof. Reversing the wheel will take off each of those layers.
- Jim advocates using the Intellimouse in this way: *turn, roll, spin* click the wheel to switch among function. Choices would be multistory select, zoom level, rotate view, rotate object.
- No shearing of terrain. *- free menu on wheel press. - pressing & releasing wheel is distinct from turning it.*
- There will be 255 levels of terrain and water.

### The Storyline

A unifying story for The Sims is being sought on several fronts;

- Will and Jim story
- Pet Fly productions as game design and story collaborators
- Ron Cobb as occasional, drop-in consultant

### Neighborhood

#### Art

- Houses will be actual representation of player-built house; the artist will create thumbnail-sized set of architectural objects for programmatically built neighborhood scene.

#### Design

- Success/failure of game is reflected graphically in nbhd screen, but not yet designed. Also not yet designed, but will be included in game are: saved games display differently than unplayed houses, how to evict families, or to place a homeless family, explore/preview modes.

## Other game elements

### Disasters

- Fire do objects have a combustibile score? Do objects need a burnt, charred graphic state? *Hard problem.*
- Other disasters: Blackout, others to be designed. *could Hot water model*

### Events

Events such as marriages, etc. will be included in game, not yet designed.

### Autonomy (from Jamie D.)

The idea at the core is simple:

*cool!*

- A person has a data field which is their degree of autonomy, from 0 to 100.
- Each interaction (Sleep, Make Bed, etc) has an autonomy threshold, from 0 to 100.
- When the **find best action** primitive is called, it ignores interactions with threshold above (greater than) the person's current autonomy.
- People always call **find best action**. When their autonomy level is low, they usually won't find anything.

Conceptually, we have something like this today. A person has a binary degree of autonomy, always 0 ("manual") or 100 ("autonomous"), and all interactions have an autonomy threshold of 100.

The initial switch over is easy:

- All interactions that have not had their threshold set will get an automatic default value of, say, 50.
- Give people the data field and change the main loop to always call **find best action**.
- Change the manual and autonomous interactions to just set the data field.
- In the code, add the autonomy threshold field to the interactions, bump up the tree table save version to detect old ones, and dole out the default value.
- Change the find best action primitive to do the threshold test in addition to the other tests.

*can check trees bump up autonomy level?*

Eventually, we'll have to assign more meaningful threshold values, such as ~0 for the group meal.

I'm not sure how we're going to hook up the degree of autonomy, but it may progress with the game level.

We may also trigger other things off of the degree of autonomy.



One problem may be the interaction of this scheme with the contribution curves, which determine how a person's motives factor into the decision. A person who is really full may still avoid the group meal, because the hunger contribution levels off.

## Interruptibility

### Vocabulary

Player directed is when player gives character instruction

Other character initiated (OCI) is other character in game interaction with selected character

### Interaction priority system

- 1) player directed interrupt of selected character
- 2) other character interrupt of selected character
- 3) autonomous behavior

### When player directs character interaction

- The player may queue up as many interactions as they wish. There is virtually no limit to the number of interactions in the queue. These interactions, however, are not visible to player.
- Interaction routes and completes one action and then moves on to the next player directed interaction.
- If there is no player directed interaction in the queue, the current interaction loops, decreasing the priority on each loop, until the priority is less than that of the other character initiated interaction in the queue

### When other character initiates interaction

- A player directed interaction can interrupt a current OCI during routing or after completion of action.
- A player directed interaction flushes OCI in the queue.
- The interaction routes, completes on action, loops decrease the priority on each loop until the priority is less than that of the next OCI in the queue.

### Routing interruptibility

- If character is routing to a player directed interaction, then routing is not interruptible.
- If in autonomous mode, a character is interruptible.
- If other character has initiated interaction, no selected character routing is required; the other character has routed him/herself over to the selected character to have the interaction.

## Thought Balloon as Visual Feedback

Originally the Visual Queue feature was thought of as a mechanism to acknowledge that the selected character "got the message" from the player of what to do. Since the display size, editability, icon choices and other thorny problems could not be solved to our satisfaction, the alternative of pie menu animated "yes" of the selected characters head will serve much of the same purpose in a simpler way.

- When the player gives a command to go do an interaction (i.e. eat), the selected character's head in pie interaction menu will shake head "Yes" to indicate that they have understood the command. (this way, if the character is routing to player's first command, there is no mid-route thought balloon that breaks in momentarily. The acknowledgment of command lives in the pie menu.) *When do they ever shake no! - One used on pointing to item, another used on selecting item, focusing to disabled item, shakes head and gives tool tip feedback*
- As the selected character is routing to go do that interaction they will display the refrig in a thought balloon. The thought balloon should have a different shape than the motive balloons. Only selected character carry around (display) their thought balloons while routing. Neighbors and other family members do not show their thought balloons in the same way.
- The icons in this thought balloon will use the catalog size object graphics (no larger than 45 x45 pixels).

*Huh?  
Do all objects have icons for thought balloons?*

*What about objects invisible objects, like routing to here, kisses, doors?*

### Advanced Interruptibility feature

For those advanced players who wish to flush the player directed interactions, a keystroke will be noted in the manual. *Small button cap?*

*Double click person's icon? person stops what they're doing and turns to look at camera.*

*Why icon is disabled. Some actions can be disabled instead of hidden, to coach user.*

### Sound design

#### SFX

- Objects and their animations in World will use .wav files.
- People, Architecture and Objects Control Panels will have some shared SFX for unified UI, and some specific SFX.

#### Music

- Freshness will be considered for music track.
- Sample rate 22 Khz, stereo, 16bit

#### Voice

- 22Khz, 16 bit, mono
- We will use either:

*Each Action should have its own icon, for better feedback. Objects may be spoofing, so the icon might be different. F.F. - food prep icon. Deploy food? - M. costume? Need higher level control.*

*- Some generic sounds, should be using our own sound resource scheme for them?*

*generic "Food Train" icon for whole food prep process. P. menu clicks and other vs. sounds.*

*level difficulty could inhibit disabled items and help feedback, but maybe that's not.*

- a more thoroughly scripted version of the Charlie Brown speak that was used in June milestone. *I like that. Expressive emotions. no verbal clutter.*
- An obscure language (Urdu, esperanto, Navajo) for entire script *like how pers understand people, only the little people are your "pets".*

Professional voice talent will be used.

Before the storyline is set, it is difficult to say how many voices we'll require for characters. Currently, we are assuming one adult male, one adult female, one kid boy, one kid girl for VO. This assumes that all onscreen characters that are adult men will have the same voice.

*I think lots of voices would improve personalities of individuals.*

### Open technical Questions

*- Hear them on phone, through high pass "phone" filter.*

Will game run in both windowed mode and full screen? Or one mode exclusively?

*Both! Expect cursor to move off screen.*

### Localization

*Multiple screens? What happens? 199.*

When localized version are produced, the Buy Build Live icons text labels will not be translated, and the icons will be read without text on the CP.

Tooltips will be translated.

### The Basket of Ideas

Here are some features that have been discussed and if there is time in development of version 1.0 of the Sims, we will revisit them. If not, this list can be considered for version 2.0.

1. Add 3<sup>rd</sup> floor to design. *~ maybe.*
2. Use real speech (English) for character.

*- not so hard.  
- HARD problems.  
- Petting to have lots and lots of Charlie Brown  
Blablabla with different voices and moods*

*not too hard. keep the door open in the code to do this.  
[Unlimited # of floors, why not?]*