

Trottier, Chris
From: Doornbos, Jamie
Sent: Thursday, April 09, 1998 5:59 PM
To: CTG @ MAXIS
Subject: new people and other stuff

Just checked in some changes to appear in the next build:

Pseudo-dynamic people panel. This was kind of gnarly. Basically WinPeople and CPState were both assuming a certain correlation of a person index (1..3) to a person type (duchess,etc.) and bitmaps (kPeopleFace1, etc). Also, the 3 was hard-wired in several places. So I created a class called PersonFinder that does the mapping (and counting) and now this class is called from both CPState and WinPeople. The PersonFinder interface will be adequate with slight modification when we get into doing families (eg should not return maids). Currently the implementation just relies on a global array for the mapping and uses the application globals for doing person selection and instantiation. The bitmaps are still brought in from the Sims data directory. Unfortunately, there was a limitation of cWinIC which only allows 8 buttons. At first glance, seems like fixing this would require a redesign of WinIC.

6 new people.

? Gail Yail
? Brad
? Dunne Un
? Sigmund Silver
? Fritz Frisbee
? Josephine Solo

All of these are copied straight from Crazy Larry. Joesphine Solo was the unfortunate number 9 and does not appear in the panel. So if you'd rather have her than somebody else, let me know.

To change the suits of the new people:

? Export the new suit to the cmx2 directory.
? Find the person's directory (eg GailYail.dir) in \$/tds5/tdsscen/objects.
? Check out the file #200#BodyStrings.cst from this directory.
? Open the file in a text editor.
? On the second line of the file, change "biped-ed" to be the name of the new suit.

To change the idle anims of the new people:

? Export anims to cmx2 directory
? Find the person's directory as above.
? Check out #128#anims.cst and #130#PersonAnims.cst
? Replace all occurrences of "crazylarry-idle1" with the name of the new idle animation.

New Behavior editor features on right click:

? Right click and drag in an empty area to clear the selection and drag a rectangle that selects every node it touches.
? Shift right click and drag in an empty area to drag a rectangle that inverts the selection status of every node it touches.
? (old) Right click on a node to create a breakpoint on that node. This only has an effect when the

editor is being viewed from the tracing window. Currently breakpoints are not saved, since they are per-object.
? Shift right click on a node to pick up all the transitions that terminate at that node. Drag to a different node and release to point all of the picked up transitions at the new node.

Trottier, Chris
From: Doornbos, Jamie
Sent: Thursday, April 09, 1998 6:02 PM
To: Doornbos, Jamie; CTG @ MAXIS
Subject: RE: new people and other stuff

Oh, by the way, to change the bitmaps that appear on the panel, edit the PeopleFace???.bmp file in "\$/tds5/sims/data/res/ui/cpanel" for that person. The files are suffixed with the person's first name. (old people are still name PeopleFace1.bmp etc).

-----Original Message-----

From: Doornbos, Jamie
Sent: Thursday, April 09, 1998 5:59 PM
To: CTG @ MAXIS
Subject: new people and other stuff

Just checked in some changes to appear in the next build:

Pseudo-dynamic people panel. This was kind of gnarly. Basically WinPeople and CPState were both assuming a certain correlation of a person index (1..3) to a person type (duchess,etc.) and bitmaps (kPeopleFace1, etc). Also, the 3 was hard-wired in several places. So I created a class called PersonFinder that does the mapping (and counting) and now this class is called from both CPState and WinPeople. The PersonFinder interface will be adequate with slight modification when we get into doing families (eg should not return maids). Currently the implementation just relies on a global array for the mapping and uses the application globals for doing person selection and instantiation. The bitmaps are still brought in from the Sims data directory. Unfortunately, there was a limitation of cWinIC which only allows 8 buttons. At first glance, seems like fixing this would require a redesign of WinIC.

6 new people.

? Gail Yail
? Brad
? Dunne Un
? Sigmund Silver
? Fritz Frisbee
? Josephine Solo

All of these are copied straight from Crazy Larry. Joesphine Solo was the unfortunate number 9 and does not appear in the panel. So if you'd rather have her than somebody else, let me know.

To change the suits of the new people:

? Export the new suit to the cmx2 directory.
? Find the person's directory (eg GailYail.dir) in \$/tds5/tdsscen/objects.
? Check out the file #200#BodyStrings.cst from this directory.
? Open the file in a text editor.
? On the second line of the file, change "biped-ed" to be the name of the new suit.

To change the idle anims of the new people:

? Export anims to cmx2 directory
? Find the person's directory as above.
? Check out #128#anims.cst and #130#PersonAnims.cst
? Replace all occurrences of "crazylarry-idle1" with the name of the new idle animation.

New Behavior editor features on right click:

? Right click and drag in an empty area to clear the selection and drag a rectangle that selects every node it touches.

? Shift right click and drag in an empty area to drag a rectangle that inverts the selection

status of every node it touches.

? (old) Right click on a node to create a breakpoint on that node. This only has an effect when the editor is being viewed from the tracing window. Currently breakpoints are not saved, since they are per-object.

? Shift right click on a node to pick up all the transitions that terminate at that node. Drag to

a different node and release to point all of the picked up transitons at the new node.

Trottier, Chris
From: Doornbos, Jamie
Sent: Wednesday, April 29, 1998 1:37 PM
To: CTG @ MAXIS
Subject: behavior tree printing!

Now you can print the behaviors of an object.

In edith or sims_edith, in the tree editing window, choose "print tree" from the edit menu, or in the behavior window, click the "Print All Trees" button.

There is no progress dialog, so the program will appear to lock during a long print. Each page printed has the file and tree name at the top left of the page. The printer settings are not saved, so to do landscape, you have to select it each time the print dialog is used.

The components of the tree are scaled from their original screen pixel size. The scale factor is chosen to try to fit the tree on one page, while keeping it within a reasonable range. The range is 3.5 to 6 on a 600 dpi printer, with linear modification for different dpi. The font size is a constant 6 pts, which should appear to be the same size on different printers.

If the tree does not fit on one page with the minimum scaling factor, more than one page will be printed, in which case the page name will be appended with something like (1/2, 1/1), which denotes the coordinate of the page in a grid of pages. Page (x0/x1, y0/y1) means that all the tree pages make up a x1 by y1 grid, and that that page is in position x0,y0. For example, a tree that takes up two horizontal pages and one vertical can be visualized as a union of pages like this:

```
-----  
|           |           |  
| (1/2,1/1) | (2/2,1/1) |  
|           |           |  
|           |           |  
-----
```

Windows 95? The Win32 documentation for certain printing parameters was poor for Windows 95 and specified that they are unused under Windows NT. Thus I am not sure if this will work on Windows 95. I think it will, though.

Trottier, Chris

From: Doornbos, Jamie

Sent: Wednesday, July 01, 1998 10:12 AM

To: Ryan, Kana

Cc: Trottier, Chris; Perry, Michelle; Mackraz, Jim; Wright, Will; Blair, Sean

Subject: RE: Can you...

The sleep tuning is a combination of several things implemented to make sleeping work right.

Discrete awake/sleep split. Before, it was a continuous alertness value. The ultra-speed-switcher has been changed to check this value, so we should no longer see the pop-into-ultra-speed while the person is still standing.

No alertness. Alertness is no longer a real motive. Nothing advertises for it and it only means anything if the person is sleeping, and then it represents how well they are sleeping. -100 is a very deep sleep. -1 is an unrestful sleep. >0 is awake.

Energy more important. The control panel energy bar now is now actually energy. The energy of the person now controls when they most need sleep. At -100, the person should go autonomous (and hopefully find a bed).

Once a person is sleeping, the motive engine takes over, increasing the energy gradually so that it should take about 10 hours to go from -100 to 100 on the expensive bed, with sleep level (alertness) of -50 and about 12 hours on the couch, with sleep level of -1.

When a person is awake, their energy decreases gradually so that they go from 100 to -100 in about 20 hours.

The sound proximity is an addition to the sound subsystem and to the object simulation that takes into account locational factors to set the volume and pan of the sounds emitted by the object.

Here are the factors and intended effects:

Overall object volume attenuated by the zoom level of the house view. Maximum in large.

Pan of sound linear with object's pixel location between left and right edge of house view. Left edge should have 0 right sound and vice versa.

Volume of sound attenuates as the object moves off screen. Should be 0 volume at 800 pixels from any edge of the screen, and "linear" in between.

-----Original Message-----

From: Ryan, Kana

Sent: Wednesday, July 01, 1998 9:38 AM

To: Doornbos, Jamie

Cc: Trottier, Chris; Perry, Michelle; Mackraz, Jim; Wright, Will; Blair, Sean

Subject: Can you...

Give us a description of the following stuff you've done so that Chris, Michelle & Sean can test:

Sleep tuning
Sound proximity

Thanks mucho,
Kana

Trottier, Chris

From: Ryan, Kana
Sent: Monday, July 06, 1998 7:10 PM
To: Trottier, Chris; Perry, Michelle
Subject: FW: visitor mini-milestone finished

-----Original Message-----

From: Doornbos, Jamie
Sent: Monday, July 06, 1998 3:45 PM
To: Mackraz, Jim; Wright, Will; Ryan, Kana
Cc: Junod, Forrest - CTG Intern
Subject: visitor mini-milestone finished

Just did some final cleanup for last week's mini-milestone this morning.
Changes should be available in the next build (and content).

You should be able to click on a phone and see an "Invite" and a "Call" interaction for each person who has been previously saved in some house, or is one of the 3 blessed people, Sam, Ross, or Mercedes. It also filters out people that are currently instantiated.
In addition, all phones in a house should ring at the same time, and stop ringing when one is picked up.

How it works:

Invisible objects

Two new invisible objects have been added. Each has a stub graphic so it can be moved around easily. The Pedestrian Portal object appears as an end table. The phone line object appears as an expensive nightstand. In the sims menu, "show special objects" and "hide special objects" allow the objects to be shown and hidden for moving around.

Neighbors

Every person is given a corresponding neighbor object when initialized. Each neighbor object has a unique id and person type (eg Sam, Ross). The neighbor id field in the person's data reflects the neighbor's id. The neighbor id space is separate from the object id space. A person has only one neighbor by definition. If two people have the same neighbor, the first person in the instance list is used, though this condition will trigger an assert warning. Whenever a person instance is created or loaded from a save file, the neighbor object for person's type is used to initialize the person's relationships and other data TBD (probably skills). In the same operation, the relationships of all the other people to the new person are updated as well.
When a person is killed by the Kill Object primitive, the data is stored back into the neighbor object.

Primitive Changes

The "create object" primitive has a new option to create a new neighbor using a neighbor id. When this parameter is used, a tree named "init visitor" is searched for and called in the new person.
The "expression" primitive has a new owner: the neighbor data. Currently, the only data available for this owner is "instance id" which evaluates to the id of the person in the world with that neighbor id.
The "set to next object" primitive has a new enum "next neighbor" for enumerating all neighbors.
A new primitive "make menu" allows check trees to dynamically create menus of neighbors. The primitive uses a string and a neighbor id to create a new menu item. The name of the neighbor is substituted for "\$Neighbor" in the string. When the menu item is selected, the action tree is queued up with the neighbor id as a parameter. This primitive may be expanded to include different substitutions.
A new primitive "call named tree" takes a string and an enumerated value of "how to call". This provides a safe, generic way for objects to interact.
New relationships between people and neighbors are available in the "relationship" primitive. The relationship of "me to neighbor in stack obj." and "neighbor in stack obj. to me" are available in the editor but not yet implemented. These relationships are the same as person relationships. TODO: implement.

Inviting neighbors

A new object, "Pedestrian Portal" in PedPortal.iff, is placed on spots where visitors can enter and exit the world. This object has a tree called "generate neighbor" which causes a neighbor to appear on top of it.
For the invite interaction, the phone uses the new primitives to add a menu item for each non-instantiated neighbor, using the string "Invite \$Neighbor". When the tree is being called autonomously, the search is skipped and the interaction is added normally.
To invite a neighbor, the phone uses a shortened version of the call interaction, and afterwards chooses a random pedestrian portal object and calls the named tree "generate neighbor" on that portal object, with the id of the chosen neighbor. If no neighbor is provided (autonomous), it chooses the first available one.
TODO: order the available neighbors by their relationship to the person making the phone call.

Generating and managing neighbors

Pedestrian portals are responsible for generating neighbors. The tree "generate neighbor" just sets an attribute to the neighbor id, notifies itself, and returns.
The main loop of the portal object checks the neighbor attribute. If it is non-zero, it creates the new neighbor and sets the attribute back to zero. When it creates the neighbor, it sets up a relationship from the person to the portal object.
The "init visitor" tree in the Person Globals sets all motives to zero. TODO: tune this.

Tree table entries, which specify the action and check tree, now have a new "available to visitors" option. By default, the option is off. Certain objects now have interactions available to visitors. The Pedestrian Portal object has a "Leave World" interaction which is available only to visitors that were created by it. Currently it does not advertise. TODO: set "leave world" ads.

Phones and phone lines

A new object data field, category, determines the phone-ness of an object by being set to 1. >1 Category is anticipated for other object, such as flowers.

Phones now have 4 states: Quiet, Ringing, In Use, and Active. Active was added for when the phone line is active, but the phone is not. The phone only sets its state to quiet or in use. Ringing and Active may only set by the phone line.

The new phone line object manages all the phones that belong to it. Belonging is determined by a relationship value of 1 of the phone line to the phone. When a phone is interacted with by a person, the phone line is synced up by running the named tree "update phones". This tree pokes new state into and notifies each of its phones, causing them to end their current idle primitives.

The phone line has 3 states: Quiet, Ringing, Active.

The tree "update phones" determines a new state for the line based on its current state and the state of all the phones. If one or more phones are in use, the new line state is active. If all phones are quiet and the current line state is active, then the new line state is quiet. Otherwise the new state is the same as the old. When the new line state is applied to the phone states, only phones which are not in use are affected.

Phones, after each main loop delay, set their graphics. Thus, every time "update phones" is called in the phone's line object, the notify will cause the graphic to change, if necessary. The new active state has the same graphic as the quiet state.

The phone line decides when the phones ring. The chance is given every 2 game minutes only when the line is quiet and varies according to time of day: 1 in 200 for night and 1 in 120 for daytime. If it decides to ring, the state is set to ringing and "update phones" is called. Then it waits for 4 game minutes and stops ringing.

Trottier, Chris
From: Ryan, Kana
Sent: Friday, July 24, 1998 11:35 AM
To: Trottier, Chris
Subject: FW: can you give me list of food sprites, objects..

Might help w/ flow chart development for food.

-----Original Message-----

From: London, Charles
Sent: Thursday, July 23, 1998 2:15 PM
To: Ryan, Kana
Cc: Doornbos, Jamie
Subject: RE: can you give me list of food sprites, objects..

Sure. I'll arrange it by how the eating progresses.

JamieD, I'm including this for you as further info on the state-change-timing issue. This list may also change who we treat the Portions vs the Platter (especially in the case of the Beans). Let's you and I discuss this after you and I talk to Chris about the Romance/Friendship Icons.

None of these names are meant to imply actual asset names.

1) The refrigerator spawns the meal object which looks like unprepared food (a tray with a can and a bowl of stuff and a milk carton), unless there is no counter/food processor. In that case, no further cooking can take place, and the food is presented as the Can 0' Beans, and eaten. In the case of a Group Meal, the food presents as the Sixpack 0' Cans 0' Beans and is served, each person taking a can. After eating, the can(s) are disposed of in the trashcan.

2) The unprepared food becomes food-being-prepped (a cutting board with progressively sliced veggies, etc) upon being placed on the counter, or right before the foodprocessor animation begins. If a stove/microwave is present, the prepped food changes to a small Pot 0' Food with food in it (unless the meal is a Group Meal, where the pot is large and only the stove qualifies as a cooking tool). If there is no cooking tool, the prepped food changes to a Salad/Group Salad and is eaten/served.

3) The Pot 0' Food is placed on a stove (or in the case of a single meal, also in the microwave) and the cooking animations are run. The Pot 0' Food then changes to the Meal (a plate with chicken/green beans/red potatoes) or the Group Meal (same contents) and is picked up and eaten/served.

4) After the meal is eaten, you have an Empty Dish for each person who ate, plus the Empty Platter if it was a Group Meal. These items are taken to the Sink or the Dishwasher for disposal.

5) The Refrigerator also is capable of spawning a Snack (a box of crackers) or a Group Snack (a cheese plate with crackers and fruit, etc...) which requires no preparation or cooking. These objects become the Empty Box and the Empty Cheeseboard, the former being disposed of in

the
trash, and the latter in the Sink/Dishwasher.

Summary of all objects:

- ? Unprepared Food
- ? Food-Being-Prepped
- ? Pot O' Food
- ? Big Pot O' Food
- ? Meal
- ? Group Meal
- ? Salad
- ? Group Salad
- ? Can O' beans
- ? Sixpack O' Can O' Beans
- ? Snack
- ? Group Snack
- ? Empty Plate
- ? Empty Platter
- ? Empty Cheeseboard

CSL

-----Original Message-----

From: Ryan, Kana
Sent: Thursday, July 23, 1998 12:24 PM
To: London, Charles
Subject: can you give me list of food sprites, objects..

Whatever you want to callö all the things that get generated through the food interactions..

K

Trottier, Chris

From: Doornbos, Jamie
Sent: Monday, July 27, 1998 5:19 PM
To: Trottier, Chris; Mackraz, Jim
Subject: RE: more playtesting/todos for Boy Next Door

The way to tweak the visitor motives is to edit the person's semi-global tree "init visitor". The way to do that is to bring up the behavior edit window for any person, and choose "Semi-global" from the categories menu, then double click on the "init visitor" tree.

Also, the file `$/tds5/tdsscen/global/PersonGlobals.iff` must be writable.

-----Original Message-----
From: Trottier, Chris
Sent: Monday, July 27, 1998 4:51 PM
To: Mackraz, Jim
Cc: Doornbos, Jamie
Subject: RE: more playtesting/todos for Boy Next Door

Can the check tree for the fridge keep them from beginning that interaction?

-----Original Message-----
From: Mackraz, Jim
Sent: Monday, July 27, 1998 4:49 PM
To: Trottier, Chris; Doornbos, Jamie; Wolosenko, Roxy; Ryan, Kana; Perry, Michelle; Blair, Sean
Subject: RE: more playtesting/todos for Boy Next Door

Yeesh. What's the fix going to be?

-----Original Message-----
From: Trottier, Chris
Sent: Monday, July 27, 1998 4:49 PM
To: Mackraz, Jim; Doornbos, Jamie; Wolosenko, Roxy; Ryan, Kana; Perry, Michelle; Blair, Sean
Subject: RE: more playtesting/todos for Boy Next Door

Oops. Sorry. The bug is that they don't have enough money to buy food, they go to the fridge autonomously, it kicks off a dialog saying that they don't have enough money, you click ok, you get the dialog again, etc. etc. forever.

-----Original Message-----
From: Mackraz, Jim
Sent: Monday, July 27, 1998 4:46 PM
To: Trottier, Chris; Doornbos, Jamie; Wolosenko, Roxy; Ryan, Kana; Perry, Michelle; Blair, Sean
Subject: RE: more playtesting/todos for Boy Next Door

Jamie, is it practical to get Chris schooled up on tweaking the init motives numbers for neighbors? Seems to fall into the space we hoped she would help fill... Maybe even show her an example of randomness in practice so she can try her idea.

Also, I don't understand this bug, but then again, it's been a while since I've played. [Characters autonomously try to get food from the fridge when there's enough money. End up in an infinite dialog box loop.](#)

-----Original Message-----
From: Trottier, Chris
Sent: Monday, July 27, 1998 4:33 PM
To: Doornbos, Jamie; Wolosenko, Roxy; Ryan, Kana; Mackraz, Jim; Perry, Michelle; Blair, Sean
Subject: more playtesting/todos for Boy Next Door

Jamie: the latest and greatest todo bible. I carried over incomplete items from the previous e-mail.
Michelle/Sean: note bugs under the Bug subhead.
Jim/Kana: note items to go on wish list for future milestones.

Top Priority to Implement

Tuning: Ross never eats a meal before leaving, even when it's available. Please start neighbors' hunger motive lower (-20?). More tweaks to init neighbor motives.... Make social VERY low (-80?), make entertainment -10, bladder 30. (I can do these myself if you point me in the right direction... it might make guessing at numbers easier.) Also, if we could add some randomness to it, it would keep the visits from always being of the same duration and the same routine: (now, Ross sits on couch, converses, goes to the bathroom, sits on couch, converses, leaves...pretty much without exception).

If just for testing purposes for now, I'd like to get a dialog telling why the neighbor is

leaving. (which motive they're going to service). Roxy may or may not decide to keep this in the long run. Let me know if this would be a huge deal to implement. Relationship ++ -- is not appearing when characters are on auto. Maybe fixed in tomorrow's build (?)
Is the romance flag hooked up with stub art?? Haven't seen it yet...
Implement ask guest to leave menu item.

Next Priority

Group meal: think about how to check for whether it should give social points (eating at same time in same room??)
Eating a good group meal gives you relationship points re: the person who made it.
Complete door interaction.
Phone dialog should say, Ross [or whoever the invitee is] says, "..." It doesn't make sense how it reads now.
Implemented or no? Flirting, complimenting, kissing, joking should occur spontaneously sometimes (with chars on auto).

Tweaks

People almost never answer the phone autonomously. Maybe increase the ad and let it ring a little longer.
Implement sleep tweaks from mtg with Will.

Bugs

People have been sleeping in the same spot as another person in the same bed. I've also seen them stand in the same spot on the floor and sit on the same spot on the couch.
Characters autonomously try to get food from the fridge when there's enough money. End up in an infinite dialog box loop.
Neighbor gets up from couch to go sit on kitchen chair, then returns to couch. On a related note: Characters often turn the TV off and then back on again within seconds.

Wish-List Features/Fixes

Problem routing to 2-person interaction when one person is seated and one is standing. The standing person will initiate the conversation directly in front of seated person. But the seated person never responds. Also, does anyone understand what's really happening with seated people's interruptability?
Conversation while seated. (So when two people are sitting watching TV together and you ask them to converse, they don't stand up and face on another and then sit back down.)
Jamie's object-autonomy setting. (Ask him for description.)

Trottier, Chris
From: Mackraz, Jim
Sent: Wednesday, August 05, 1998 4:37 PM
To: Doornbos, Jamie; Trottier, Chris; Ryan, Kana
Cc: 'Doornbos, Jamie'; Wright, Will
Subject: RE: "autonomy level" explained

Well detailed. (You might want to explain what you mean by "I read it, of course, as 0xffff".)

It sounds like Jamie's got enough of a handle on it that he can implement it in the name of experimentation, but I'd like to hear from the designers to confirm that this "autonomy knob" is still something they're optimistic about using, and at least would like to try. If somebody could offer up a dynamic for how this knob is turned, it would give Jamie a more concrete way to deploy this implementation. Level 1 vs Level 2 might suffice.

Jim

-----Original Message-----

From: Doornbos, Jamie
Sent: Wednesday, August 05, 1998 3:14 PM
To: Trottier, Chris; Ryan, Kana
Cc: Mackraz, Jim; Doornbos, Jamie; Wright, Will
Subject: "autonomy level" explained

The idea at the core is simple:

- ? 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.

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.

Trottier, Chris
From: Doornbos, Jamie
Sent: Wednesday, August 05, 1998 10:12 AM
To: CTG @ MAXIS
Subject: new stuff in behavior editor

I added some new features, while simultaneously getting rid of some bad code.

? Comments integrated in trees. Comments may now be selected and copied just like other nodes. Their look is the same, but the old supporting code is now only necessary to convert old

comments. They cannot have transitions in or out.

? Label Nodes. Labels are a new node type that may be added to a tree, and appear as a box with a label in it. Like other nodes, any number of transitions may enter a label. But only one

may leave. Labels may be added by the "Add Label" button, and edited by double-clicking.

? Goto Nodes. Goto nodes are currently added to a tree by control-right-clicking and dragging a

label node. Any number of transitions may enter a goto, but only one may leave, and it's only

valid target is a label node. The transition out of a goto node is only drawn when it is being

dragged. That way a tree can transition back to the beginning of a loop or a section of a tree

and not look like haywiring.

? Multiple Undo. There is now a redo command in addition to the undo command, and they work as expected. Currently there is no limit on the number of steps recorded. This may cause

a problem for long edit sessions, since each undo recorded can take 3K for a large tree. Also,

due to difficulty in implementation, an undo is recorded sometimes when there is no change.

For instance, an undo is recorded when a click occurs in a node, even though it only needs to

be recorded when the node is dragged. Thus, when using the undo feature, you may have to go

back more than one step before something changes.

? Interface changes. Got rid of editing buttons in the window, and moved the commands to the

edit menu.

TODO:

? Compare undo buffer before recording to avoid unnecessary records.

? Add new dialog for TreeProperties, which will allow labelling of local variables and editing a tree description.

? Text coloring for different node types. Forrest says, in particular, expression nodes should be a different color.

? Make copy and paste work from the Behavior editor window.

Technical notes

? Runtime behaviors vs. graphical. Each tree has two resources, one of type BHAV and one of

type TREE, formerly type POSI. BHAV stores the minimum, compact, behavior necessary to be executed by the TreeSim. TREE stores the node comments and drawing parameters, as well as extra nodes, like comments. When a tree is saved, the BHAV is generated by skipping

irrelevant nodes.

? The legacy POSI code was some of the most twisted stuff ever, and still seemed to have an occasional bug in it. One big complexity was that it was trying to maintain the BHAV indexing scheme while also saving non-existent nodes. The new stuff just uses its own indices and generates the BHAV index when needed. Adding save fields to a node was a nightmare, and the comments were stored completely separately at the end of the resource. cTree::Unpack is all that's left of it, and POSI is now read-only (rest in peace). Now callers access the TREE resource indirectly through "InstallData", "SaveData", and "RemoveData", which in turn use the Recon.h utilities, the same that the objects use to read/write house file resources. Also, the BHAV is generated and saved by a separate routine, since it rarely changes. Saving trees is incredibly simplified, with an open door to anything we may want to start saving.

? The cNode class now supports 6 types of nodes, which control the behavior when clicked and the drawing.

- kNormal - primitives and tree calls. each of these nodes has a corresponding BehaviorNode in a BHAV
- kPopOutTrue - small T box for exiting. these nodes are saved as special transition values within a BehaviorNode
- kPopOutFalse - same for false exit
- kCommentOnly - editor only. never hooks up to anything.
- kLabel - editor only. skipped when creating BHAV.
- kGoto - editor only. skipped when creating BHAV.

Trottier, Chris
From: Bowman, Eric
Sent: Monday, August 10, 1998 11:40 PM
To: MAXIS CTG @ Maxis
Subject: Huge antialiasing speedup

Anti-aliasing is now free! Well, sort of.

I just finished implementing the first end-to-end of a new sprite format/decoder (aka blitter) technology. Previously z, color, and alpha data were encoded separately in separate streams. This forced a break from a simple RLE decoder (legacy from SimCity 2000, I think) to a decoder that could "decompress" multiple streams simultaneously. The new sprite format interleaves pixel, z, and alpha (or just pixel and z data, though I haven't written that decoder yet) in a single stream, and gives up trying to encode runs of anything but clear space. This lets us get back to a simple decoder that is much faster.

The old decoders took an average of 0.09 ms, 0.20 ms, and 0.53 ms, to decode small, medium, and large versions of the "expensive floor lamp" sprite, respectively, non-antialiased. With antialiasing turned on, it took a depressing 0.24, 0.52, 1.19 ms.

The new antialiasing decoder draws the same sprite in an average 0.14 ms, 0.23 ms, and 0.35 ms! That's a speedup of 0.64x, 0.87x, and 1.51x over the old non-antialiasing decoders. OK, so it's only a speedup in the large-zoom case (hence not really free), but you get the idea. (The speedup is 1.7x, 2.3x, and 3.4x between the new antialiasing decoder and the old one).

Unfortunately there are about 8 more such decoders to write, plus complications in the inner loop to handle floors, walls, and thick wall pieces...

I haven't tried 4 bits of alpha instead of 5, or MMX, or even assembly. 4 bits of alpha would reduce the size of a certain lookup table from 32k to 4k, which seems like a possible big win, if the quality tradeoff is reasonable. We might even be able to switch from the 4k to the 32k lookup table on slower machines, or even dynamically if we start getting behind.

So I guess interleaving pixels, z, and alpha was worth it...

Trottier, Chris
From: Junod, Forrest - CTG Intern
Sent: Monday, August 10, 1998 6:20 PM
To: MAXIS CTG @ Maxis
Subject: Maid Mark 1.0

Maid Service

The Maid has arrived. In order for you to get the maid to come visit your favorite level just get a copy of the newest build, let it run until there is green slime in the fish tank and then call the Maid on the phone. You don't have to have green slime in the fish tank, but by the time you do you know that the house is probably dirty enough for the maid to clean a few things. Once the maid has been called she will show up at the door just like a neighbor. When a character lets her inside she will begin to clean. She currently cleans the thirteen objects listed below. However this list is subject to change once the object list has been finalized. If the maid seems to be acting a little funny when cleaning the Bookshelf, End table or several other objects rest assured that this is just the place holder animation and will be changed in the future. When she can't find any more things to clean she will stop her cleaning and make herself at home. If you want her to leave just pay her by clicking on her and selecting the Pay the Maid interaction. Once she has been paid she will go on her way. If you have any problems just let me know.

Objects that can be cleaned

Aquarium	Stove cheap
Bed Stand	Table1x1
Bookshelf	Counter cheap
Coffee Table	Bed cheap (she makes the bed)
Dresser Ex	Toilet
End Table	Tub
Mirror Ex	

Trottier, Chris
From: Doornbos, Jamie
Sent: Thursday, August 13, 1998 11:53 AM
To: MAXIS CTG @ Maxis
Subject: neighborhood window & stuff

I added some new stuff to sims (with edith) for viewing and editing neighborhood data and relationships.

Neighborhood Dialog

In edith panel, choose the "Sims->Neighborhood..." menu item to see the neighborhood data fields, and a list of all the neighbors.

On the left is the Neighborhood data. This is just stuff that is saved whenever any house is saved, so that things that happen in one house can affect things in a another house later. Currently there is only one value:
? highest level completed. set when the "level complete" primitive is called.

On the top right is the Neighbors list. It shows all the people by name and neighbor id.

Click on a neighbor to see its associated data in the list on the bottom right. These fields are read only, because they are generated from the current state of the game.
? instance id. if the person is currently in the house, this will be non-zero
? lives in house. if the person is from the current house, ie appears in the people panel, this should be one, and otherwise zero.

Click on the "Relationships..." button to see the selected neighbor's relationships to other neighbors.

Improvements in Relationship Dialog

The object relationships dialog may be brought up from the module inspector using the "Object->Relationships" menu. The neighbor relationships dialog may be brought up from the neighborhood dialog as described above. The two are using the same code, upgraded from the previous singular object display.

The object or neighbor the dialog is displayed for is the "from" of the relationship, the items in the top list box are the "to" of the relationship, and the relationship labels are the description of the value.

For example, Mercedes' relationships may include a value of 25 for the affinity relationship to the bed and could be stated as "Mercedes has an affinity of 25 to the bed."

Functions in the Relationship dialog:

? "Remove Var" button. Removes the last variable from the list. Relationships are always numbered from 0 to some number, N, so only the Nth one may be removed.

? "New Var" button. Adds a new variable to the end of the list.

? "New Relationship" button. This adds a new relationship to the most recently clicked item in an

inspector window. For objects, the item is the first of the most recently clicked objects in a module inspector. For neighbors, this is the most recently clicked neighbor in the neighbor list of a neighborhood dialog.

Example: make Ross hate Mercedes.

? Open the neighborhood dialog.

? Click on Ross in the top right list.

? Click Relationships button to bring up dialog for Ross.

? Select the neighborhood dialog again and click Mercedes.

? Select Ross' dialog and click the Add new relationship button.

? Double click the "likes" variable label in the bottom list.

? Type in -60 and press return.

Note on neighbor relationships:

Neighbor relationships are the persistent version of person to person relationships.

Whenever the

simulation kills a person (not just when deleted), the person's relationships are copied to the

relationships of the corresponding neighbor. Then whenever a person is loaded or created, the

relationships of the corresponding neighbor are copied into the person. So if you change some

neighbor relationships for someone in the house, the that person leaves, the values will be

overwritren.

Trottier, Chris
From: Doornbos, Jamie
Sent: Wednesday, August 19, 1998 9:11 AM
To: MAXIS CTG @ Maxis
Subject: tree queue dialog

I just added a new dialog to the sims with edith. It shows the current action and all of the queued actions for a person.

To see a person's actions, bring up edith and open the object inspector. Select one or more people and choose "Tree Queue..." from the Object menu.

In the dialog, each line in the list is an action. There is always at least one line; the first line is the current action. If a person is idling, there will be one line and the labels will be "zeroed out".

Each column of the list is an action property. The properties shown are:
? Object. The name of object that the action is from.
? ID. The id of the object. The id can be used to distinguish which object when there are multiple instances of the same object.
? #. The number of the interaction. This is just the position of the item in the tree table.
? Pri. The priority of the interaction. Priorities are not currently hooked up to anything, but are being assigned to actions.
? Action. The name of the interaction. This is just the name of the tree that the tree table entry specifies. For efficiency reasons, autonomous actions do not compute the action name and it will appear as "???".

The Update button reads the person's actions and updates the list.

The Update 1 Hz button causes the person's actions to be read and the list updated once per second. This is the default when the dialog is first started.

TODD: for testing, enable delete key when an action is selected to remove the action from the queue.

Trottier, Chris
From: Doornbos, Jamie
Sent: Thursday, August 20, 1998 6:38 PM
To: MAXIS CTG @ Maxis
Subject: people prefer to walk on sidewalks

I just finished upgrading the routing to score floored tiles higher than plain dirt outside on the first level. It should be available in the next build.

It's set so that walking on dirt is roughly three times as expensive as walking on floor.

(In the process, I set up a cache of the room partitioning in the existing room structure, thereby eliminating the need to calculate it on every route. This should be a significant reduction in the overhead of the routing, though I have not timed it.)

TODO:

? Distinguish roads from floor and sidewalk. Currently the road is scored just as high as the sidewalk, since they are both floors. Perhaps they should prefer sidewalk, then dirt, then road.

? Find a way to make the path smoothing not so smart when dealing with sidewalks.

Currently

they make a straight line between their entry into the sidewalk and their exit, which looks unnatural.

? Find a way to dirty the room partition when a floor is put down outside. Currently newly placed

or deleted sidewalks will not affect the routing until some other room change is made.

From: Mackraz, Jim
Sent: Friday, August 21, 1998 8:21 PM
To: Doornbos, Jamie
Cc: Ryan, Kana; Curtin, Claire; Wright, Will; Wolosenko, Roxy
Subject: RE: tree priorities are here

Excellent. I'll be playing and playing.
Thanks for the clear breakdown of the effect in terms I could understand.

[People behave almost like the design doc specifies](#) begs the question, "How do the implementation and design differ?" Can you list the differences and design questions (e.g. answering the door) that need more details? We want the spec to match the design in this area, because I suspect we'll want testers to be able to read about the details so they can help us spot interactions like TV that need to be modified, and sequences that should be easier to interrupt.

-----Original Message-----

From: Doornbos, Jamie
Sent: Wednesday, August 19, 1998 5:48 PM
To: MAXIS CTG @ Maxis
Subject: tree priorities are here

I just finished implementing tree priorities. Should be in the next build.

People behave almost like the design doc specifies:
A character, Ross, running an autonomous interaction will be interrupted when the user selects Ross and directs him to another interaction
the user selects a different character and directs them to do a social interaction with Ross
someone comes to the door and chooses Ross to answer it.

A character, Ross, running a user-directed interaction will be interrupted when the interaction is finished.
someone comes to the door and chooses Ross to answer it.
Ross is doing "Go Here" and the user directs him to do anything, including another "Go Here".

A character in their idle loop is always interruptible.

When a character is directed to do something, and they do not get interrupted, the clicked action will queue up until the priority is low enough.

TODO:
Some interactions (Watch TV) that go on indefinitely must be modified to decrease the person's priority so that a user directed click will eventually get them outta there.
More design on what happens when a door needs to be answered.
Find places where interrupt delay is long and fix trees and/or animations to allow interruption more frequently.
Implement special key for making the current interaction interruptible.

From: Doornbos, Jamie
Sent: Saturday, August 22, 1998 1:39 AM
To: Ryan, Kana
Subject: RE: tree priorities are here

Autonomy implementation is still the same as it was.

With the series of things you did, yes, that's the expected behavior. The routing in the social object needs some tuning up, as we talked about from the last milestone. What happened (I think) was that the timer for waiting for the other person timed out, so Ross bailed and accepted the next action.

For Answer Door, there is no menu item. The person who is knocking searches for the best person to answer it by scoring each person and taking the highest score. Here's how a person is scored:
start out with 0
if person is idle, +200
subtract distance from door to person
if person is visitor, subtract 100

Once a person is found, the Answer Door action is pushed onto that person's queue with maximum priority. This is subject to design.

As for the special key to stop the current interaction, it's needed to cancel interactions, like in the design doc. With the current implementation of the food, yes, the food would just get deleted. This is also subject to design. It's a hard problem because it's hard to define where the food should be put down.

-----Original Message-----

From: Ryan, Kana
Sent: Friday, August 21, 1998 12:57 PM
To: Doornbos, Jamie
Cc: Mackraz, Jim; Wolosenko, Roxy; Curtin, Claire
Subject: RE: tree priorities are here

Jamie,

I've been trying to spend some time playing w/ this. Few questions & comments:

What is current autonomy implementation - still have to select autonomous for characters to go autonomous?

I did have the following situation... is this the way we expected it to happen?

Directed Ross to sit

Directed Mercedes to come complement Ross

Directed Ross to turn on the light which he went to do before Mercedes could get to him (she had a long way to route to get to him)

Mercedes went to where Ross was when I told her to complement him & started talking... as mentioned above Ross was no longer there

K

-----Original Message-----

From: Doornbos, Jamie
Sent: Wednesday, August 19, 1998 5:48 PM
To: MAXIS CTG @ Maxis
Subject: tree priorities are here

I just finished implementing tree priorities. Should be in the next build.

People behave almost like the design doc specifies:

A character, Ross, running an autonomous interaction will be interrupted when the user selects Ross and directs him to another interaction

the user selects a different character and directs them to do a social interaction with Ross

someone comes to the door and chooses Ross to answer it. [Is there an answer door menu interaction? If not, does simulator decide who answers the door & if so what are the rules? I didn't think so from the last time I played & haven't gotten a neighbor to come over yet so that I could check this out. I'll keep trying.](#)

A character, Ross, running a user-directed interaction will be interrupted when

the interaction is finished.
someone comes to the door and chooses Ross to answer it.
Ross is doing "Go Here" and the user directs him to do anything, including another
"Go Here". [I really like this!](#)

A character in their idle loop is always interruptible.

When a character is directed to do something, and they do not get interrupted, the
clicked action will queue up until the priority is low enough.

TODO:

Some interactions (Watch TV) that go on indefinitely must be modified to decrease the
person's priority so that a user directed click will eventually get them outta there.

More design on what happens when a door needs to be answered.

Find places where interrupt delay is long and fix trees and/or animations to allow
interruption more frequently.

Implement special key for making the current interaction interruptible. [Why is this needed?](#)
[If we allow this what will happen w/ long sequence interactions i.e. have a meal... will
food just disappear if in mid interaction?](#)

Trottier, Chris
From: Mackkraz, Jim
Sent: Wednesday, August 26, 1998 11:07 AM
To: Ryan, Kana; Trottier, Chris; Perry, Michelle; Wright, Will; Wolosenko, Roxy
Cc: Hopkins, Don
Subject: FW: GridBlitter!

If I may help translate:

? next build, when editing the second story, you'll see a grid indicating illegal tiles on which you can build (new floors).

? The definition of illegal tiles is currently where it is flat downstairs. The definition will change to spec, once the spec arrives. It is expected to be something like: over existing floors, or within

two tiles of same, providing the ground is flat below both.

? There are opportunities to crank this thing up to provide other kinds of feedback, perhaps a replacement for the Red X.

It will appear in tomorrow's build (note the timestamp on Don's message). I'm compiling a freshie now, so you should be able to check it out on my machine later.

-----Original Message-----

From: Hopkins, Don
Sent: Wednesday, August 26, 1998 8:05 AM
To: MAXIS CTGPROG @ Maxis
Subject: GridBlitter!

I've implemented a GridBlitter. It draws pixel perfect grid lines, with both white and black edges that meet up to form nice sharp edges, and 12.5% black stipple inside the grid, so it darkens everything underneath.

Right now it just draws a grid on flat tiles of the current level that don't have a floor. Soon it will be driven by a new layer of flags for editing constraints and feedback. We should be able to do stuff like turn the grid stipple red to highlight bad tiles (where you're trying to build but can't), just by setting bit flags in the new layer.

Also:

in ObjectModule.cpp I put some D(...) macros around new code what was going << to ctgDump, so they don't cause compile errors in the release build.

-Don

Trottier, Chris

From: Doornbos, Jamie
Sent: Thursday, August 27, 1998 1:27 PM
To: MAXIS CTG @ Maxis
Subject: file format change

I just checked in a stairway object with the (final) multi-tile layout, and some stub graphics.

stair.iff and stair.spf

However, in order to to implement the stairway's graphics (z displacement), some **changes** were made to the graphics format. **Old executables cannot read the new stair.spf properly.**

Thus, if you want to place a stairway before tomorrow's build, get **fresh** objects from sourcesafe and a **fresh** executable from G:/projects/tds/temp. Also get the fresh executable if you need to freshen objects for some other reason.

Irk & Charles: Stair.tga and Stair.bmp are stubbed as well. They should just have the single stair piece at 0 altitude. Stair.omk reflects this and is ready for "cbcleanspr stair". I can get rid of the big arrow any time.

From: Mackraz, Jim
Sent: Thursday, September 03, 1998 1:48 AM
To: Ryan, Kana
Cc: MAXIS CTG @ Maxis
Subject: RE: sorry...

To summarize some of the recent EMail and older news, here's where builds are placed:

Nightly (Automated)

//elmo/ctg/projects/tds/DailyBuild: results of nightly build, plus updates through the day, if any. Disk1 in that folder contains the old-style installer, which is the one that can currently be automated. You can't double-click on setup.exe (because InstallShield 3 can't deal with long filenames such as "DailyBuild") but you can double-click on setupex.exe, which is the self-installing executable package.

<ftp://zoloft/pub/install/Nightly/iTheSims.exe> – self-installer made nightly, a copy of setupex.exe in Disk1 above. Back versions are rolled through iback01.exe through iback03.exe.

Manual

When I manually build the new-style installer (which is required to get the double-click on a house functionality), I put the installation image in //elmo/ctg/Testing/Daily/Disk1. You can click on setup.exe. This installer works better (faster) and contains the modern enhancements, like registering .hse files for double-clicking, etc.

“Posted” Builds

When a build is useful as milestone release or otherwise important to people outside of the group, it goes in //willie/Toys/Sims/Disk1. You can double-click on setup.exe. These builds are announced to a mailing list I keep which includes CTG plus interested people in the studio outside of the group. Henceforth, these are the new installer.

There's one more place on zoloft web for “posted” builds, but I won't be updating that until I can get the new installer to build a self-installing package, and maybe we'll drop it entirely since everybody can now reach //Willie/Toys.

-----Original Message-----

From: Ryan, Kana
Sent: Wednesday, September 02, 1998 2:25 PM
To: Mackraz, Jim
Subject: sorry...

But there is some confusion about where to find builds.... Mostly from the design & production team that wants to know where/how to find latest & greatest to try out.

I previously understood the following:

On tds

DailyBuild = nightly if good + updates throughout the day... good for design & production to test & try out latest & greatest

Toys & Zoloft = updated when notable & reliable build... most appropriate for public audience i.e. maxoids not on team

Is this still correct... if not, can you provide update.

Thanks,
K

Trottier, Chris

From: Mackraz, Jim
Sent: Wednesday, September 09, 1998 7:16 PM
To: MAXIS CTG @ Maxis
Subject: Neighborhood lots and houses

Here is the mapping from Lot numbers to House files.

The lot numbers are on the hardcopy neighborhood map.

The house numbers are concatenated to make the housefile name, e.g., '2' maps to house02.iff.

Lot	House
1	5
2	3 (<i>The Kiss</i>)
3	6
4	7
5	8
6	9
7	4 (<i>Money Pit</i>)
8	2 (<i>Girls Wanna Have Fun</i>)
9	10
10	1 (<i>The Crip</i>)

Trottier, Chris

From: Ryan, Kana

Sent: Thursday, September 10, 1998 6:02 PM

To: Trottier, Chris

Subject: FW: New simple object placement and rotation implemented for arch mode!

-----Original Message-----

From: Hopkins, Don

Sent: Thursday, August 20, 1998 5:45 PM

To: Hopkins, Don; Mackraz, Jim; Wolosenko, Roxy; Curtin, Claire; Wright, Will

Cc: Ryan, Kana; Perry, Michelle; Trottier, Chris; London, Charles; MAXIS CTGPROG @ Maxis

Subject: New simple object placement and rotation implemented for arch mode!

I've implemented a new simple object placement mode, and turned it on in architecture mode. The move button in buy mode, and the buy placement tool, are still the same old tools, though.

To try out the new placement tool:

Place a few chairs, a few large sofas, and a few beds to try out the multi tile placement behavior. Then switch to architecture, select the hand, and try moving things around.

The basic idea is that you are able to optionally rotate the object to face an absolute direction, at the beginning and/or the end of the move gesture, by holding down the button and moving as you pick it up or drop it down. So you can rotate it while you pick it up, as well as while you place it down, neither, or both. And then you can double click to rotate it clockwise (double click picks it up and sets it down again, rotated). It also rotates when you try to drop it in an illegal position, which may be redundant but is convenient. So there are lots of ways to rotate, that fit naturally into the movement gesture, but don't get in the way of making movement very easy. The good old "click to pick up, move, click to put down" works without any weird "sticky" behavior, and rotating on double clicks is as convenient as it needs to be, given that there are even easier way to rotate.

When you pick an object up, it remembers the offset from the cursor position to the tile center of the object, and adds that in as it tracks, so the base of the object does not snap to the cursor position when you pick it up. That was causing problems picking up pictures against walls, and especially picking up tall things like trees. Now it just picks it up relative to wherever you grabbed it so it doesn't jump under the mouse.

- A) When you're not holding an object, you can pick one up by clicking, or rotate it around then pick it up by pressing and dragging (the footprint becomes visible on mouse down):
- 1) Click (press down and release without moving) to pick the object up.
 - 2) Drag (press down and move) to pin the object down and rotate it towards the cursor, and it rotates in place while you hold the button down.
It rotates until you release, then it's picked up and snaps to the mouse, allowing you to move it normally.
- B) When you're holding an object, it follows the cursor around, even though the button isn't held down. It has a "footprint" underneath it to show you're holding it. You can drop it by clicking again, or drop then rotate it around by pressing and dragging:
- 1) Click to drop the object.
 - a) If the object is in a valid location, it's dropped. (footprint no longer visible)
 - b) If not, it displays red X's (or whatever), and it beeps and rotates instead. (footprint remains visible).
This makes it very easy to rotate a long object into place so it fits.
 - 2) Drag to pin the object down and rotate it towards the cursor, and it rotates in place until you release, then it's dropped and stays where it is (footprint no longer visible).

If you're not holding an object, and you double click on an object (pick it up and put it back in the same place without moving the mouse), the object rotates when you drop it and is then deselected. So you can double click again and again to rotate any number of times, without moving it. So you can rotate it, without getting it stuck to the mouse.

When a multi tile object rotates, it rotates around the tile that you picked up. When you drag in a direction to make the object face in an absolute direction, that tile of the multi tile object may have a different idea about which was is "front" that you would expect. We need an object field so we can specify which direction is "front" for the purposes of object placement rotation. i.e. the direction towards the head of the bed would be "front" instead of the current sideways front.

To be implemented:

Placing objects on the ground floor outside when the level is above ground.

Subclass of MoveTool called BuyTool that creates new objects and lets you place them.

Deploy MoveTool and BuyTool in the rest of the game.

Placing trees at any location.

Animation that lifts the object up off of the footprint
(so you can see the footprint, and so the moving object is very obvious),
and smooth dragging and snapping feedback.

-Don

Trottier, Chris**From:** Doornbos, Jamie**Sent:** Friday, September 11, 1998 9:53 AM**To:** MAXIS CTG @ Maxis**Subject:** primitive "change suit"

I just added a primitive for tweaking a person's suit. I tested it by making an alternating casey/mercedes. Once we get a cue stick suit exported, we'll be able to see how it looks with a little tree tweaking.

The primitive has three parameters:

suitLocation

The location of the suit. Ultimately just specifies which file the suit name is stored in. It has the following possible values:

kObject - the object that owns the current behavior specifies the suit name. The pool table will contain the names of it's accessories (eg cue-left, cue-right, rack) and use the primitive with this parameter to simulate someone holding a cue stick..

kGlobal - the suit name is stored in the global behavior file, global.iff. This may be useful for having randomly generated party guests that don multiple suits just for entertainment. Also cigarettes or umbrellas.

kPerson - the suit name comes from the person's suit table. The primitive dialog will display names from the person global file, PersonGlobals.iff, but when the primitive is executed, the names from a person's individual file will be used. This will be used to implement naked suits that vary from person to person. Also other special suits like swimming and fancy.

Currently the location is only allowed to be kObject. It will be expanded when needed.

suitIndex

This specifies which suit name is to be taken from the file's suit table. It is tracked automatically by the primitive dialog using a combo box.

undress (boolean)

Specifies if the suit is to be removed instead of put on. This will be used by the pool table when the Play interaction exits, or when shooting if and when we flip from cue left to cue right.

Trottier, Chris
From: Doornbos, Jamie
Sent: Thursday, September 17, 1998 4:09 PM
To: MAXIS CTG @ Maxis
Subject: pool table!

In the next build, you should be able to see the first pass at the pool table behaviors and graphics.
It's neat-o.

The interaction is called "Practice" and is the one player version of pool. Some of the features include:

- ? Two possible rack locations, one facing each end of the table. The person will choose the closest one to rack at.
- ? Individual ball visibility tracking. When a ball is sunk, it will not appear on the table for the rest of the game.
- ? Random ball motion. A given ball has 6 possible locations on the table, one for each tile. When the table is "active" just after a shot, they randomly switch between their possible locations.
- ? Ball slow down. Right after a shot, the balls move fast, and get slower with time.
- ? 10 possible shooting locations. Chosen randomly (see TODO section)

TODO for Practice interaction:

- ? Change the way the shooting location is chosen to only choose locations that have the cue ball.
- ? Tune up animation registration. Currently arms go through table.
- ? Add the right handed cue stick accessory for shooting, as well as the rack accessory.
- ? Find a way to mix in the right arm carry when routing.
- ? Add events to shoot anim so that the balls start moving right when the stick hits the cue ball.
- ? Add events to rack animation so that the rack accessory appears at the right time, and disappearance is synchronized with sprite appearing on table.
- ? Add sound effects.
- ? Make fewer balls move during shot. Probably do this using the initial value of the velocity so soft and hard shots can be simulated.
- ? Add entry guards. Right now two people can Practice and really screw each other up.

Design questions:

- ? Interruptibility? I was thinking that a person may exit a game any time after the rack, and then for fifteen minutes, the pool table would attempt to reinstate the interaction by pushing a low priority interaction. This would also enable people to have conversations while playing pool. This could also be done if a person fails due to routing.

Tech

- ? In order to implement the balls, I had to add a new hook into the object behaviors for sprite visibility. It was well worth it. May be useful for adding graphical states that aren't quite graphical states. Like the spatula coming off of the barbecue.

From: London, Charles
Sent: Friday, September 18, 1998 12:07 AM
To: Junod, Forrest - CTG Intern; Hedman, Eric; Doornbos, Jamie
Cc: Ryan, Kana; Mackraz, Jim
Subject: FW: BBQ implementation discussion

[Sorry. Sent too soon! Read this one.](#)

-----Original Message-----

From: London, Charles
Sent: Thursday, September 17, 1998 3:06 PM
To: Junod, Forrest - CTG Intern; Hedman, Eric
Cc: Doornbos, Jamie; Ryan, Kana; Mackraz, Jim
Subject: BBQ implementation discussion

Here's the abstract of what we discussed, broken out by animation.

Please look this over, flag any problems or omissions we didn't catch already, and send me back either the corrections or a note of signoff.

When all is finished, I'll enter the contents of the email into the DB. I think this process of face to face, followed by email, followed by database update, is the way to go on all future objects. Jamie, what do you think?

BBQ Implementation (All names here are provisional; final names will appear in the DB.)

0)- route to BBQ slot (in front of grill, on left side)

1) adult-bbq-turnon

From facing standing, step forward, open lid, turn on grill. Requires xevts for opening the lid, and for changing the grill sprite state from off to on. To make sure that the skill adult-bbq-interrupt-grillside (see below) will work with the cookloops, make sure that the grillloops and the end of this skill (adult-bbq-turnon) share a position.

1a) adult-bbq-interrupt-grillside

If interrupted during adult-bbq-turnon, this animation will step the character back to the grill side routing slot. It joins to the end of adult-bbq-turnon

2) adult-bbq-getfood

From end of adult-BBQ-turnon, step to side, open fridge, get food, put food, close door, step up to prep area, in position to run prep loops. Requires xevt's for opening the fridge, putting the food down, closing the fridge. This skill serves as the "start" animation for the prep loops.

2a) adult-bbq-interrupt-prepside

If interrupted during adult-bbq-getfood, or any of the adult-bbq-preploops (see below), this animation will step the character back to the prep side routing slot. It joins to the end of adult-bbq-getfood (or any preploop).

3) adult-bbq-preploop1

From end of adult-bbq-getfood, chop food. This should be a small loop. Requires xevt for changing frame of food object. This is a loop.

4) adult-bbq-startgrill

From end of adult-bbq-preploop(n), pick up food, step sideways to grill, put food down, end in position to run grill loops (see below). This anim requires an xevt to signal the appearance of the spatula accessory. The end position of this skill should be the same as the end position of adult-bbq-turnon in order to support adult-bbq-interrupt-grillside (see above). If interrupted during this skill, adult-bbq-startgrill, or any of the below grill loops, play adult-bbq-interrupt-grillside (see above)

5) adult-bbq-poke

From the end of adult-bbq-startgrill, poke at food. This is a short loop.

6) adult-bbq-flip

From the end of adult-bbq-startgrill, flip food with spatula. This is a short loop.

7) adult-bbq-watch

From the end of adult-bbq-startgrill, watch food cooking. This is a short loop.

8) **adult-bbq-stopgrill**

From the end of any of the grill loops (see above) get food, turn off grill, close lid, step back to routing slot on grill side. Requires xevt's for picking up food, changing the grill sprite state from on to off, and for closing the lid.

Summary list of all necessary skills:

adult-bbq-turnon
adult-bbq-interrupt-grillside
adult-bbq-getfood
adult-bbq-interrupt-prepside
adult-bbq-preploop1
adult-bbq-startgrill
adult-bbq-poke
adult-bbq-flip
adult-bbq-watch
adult-bbq-stopgrill

Trottier, Chris

From: Bowman, Eric
Sent: Tuesday, September 22, 1998 6:44 PM
To: Trottier, Chris; Mackraz, Jim; London, Charles; Doornbos, Jamie; Ryan, Kana
Subject: RE: build mode popups

Close, but not quite.

- Catalog thumbnails for build mode objects are separate for now, and live in `$/TDS5/Sims/Data/Res/UI/CPanel/Build`
- I think there are only 3 plant subtools
- The column is an object, so let's follow the object rules for it (even though it is slightly perverse to do so...).
- Pricing info for non-objects is currently hard-coded in the code.
- Name and description go in the CST files. Pricing does not.

-----Original Message-----

From: Trottier, Chris
Sent: Tuesday, September 22, 1998 6:35 PM
To: Mackraz, Jim; London, Charles; Doornbos, Jamie; Ryan, Kana; Bowman, Eric
Cc: Trottier, Chris
Subject: FW: build mode popups

Okay, so to sum up...

These go in database and follow the regular export/import process for text, pricing, and catalog thumbnails..

- 1 stair subtool
- 4 plant subtools (tree, shrub, flower)
- 2 door subtools
- 2 window subtools

Text and pricing info for these go in .cst files (for now). Catalog thumbnails are coded manually.

- #128#Terrain.cst 3 terrain subtools (terrain down, terrain level, terrain up)
- #129#Wall.cst 4 wall subtools (wall, fence balustrade, column)
- #131#Wallpaper.cst 8 wallpaper subtools
- #130#Floor.cst 8 floor subtools
- #132#Hand.cst 1 hand subtool

Mackraz, Jim

From: Bowman, Eric
Sent: Tuesday, September 22, 1998 2:37 AM
To: MAXIS CTGPROG @ Maxis
Subject: Using Tooltips

Here's a summary on using tooltips.

Unless specified, all cGZWin member functions are assumed to have a "this" pointer that is the window the tooltip is triggered from, not the tooltip window itself.

- Any window can have a text-based tooltip "for free" by calling: `cGZWin::SetToolTipsText(cRZString("my tooltip"))`. Nothing else required to get the default behavior.
- To make the tooltip over a particular window *not* motor up, call `cGZWin::SetTTMotorDuration(0)`.
- To make the tooltip over a particular window engage the instant the mouse enters the window, call `cGZWin::SetTTTimeout(0)`.
- The window manager will automatically nudge the tooltip to keep it completely onscreen. There is no way to disable that at present, but that's easy to change if we need to.
- Never `AddChild` a tooltip window to any other window!
- To change how a tooltip is positioned over your window, override `cGZWin::GetTTPosition()`. You are passed in a `bool` telling you whether the tooltip is about to start motoring up (good time to position it relative to the mouse) or not (in which case the tooltip is already up, such as when the user moves the mouse around from window-to-window with tooltips up). Return a point in mainframe (screen) coords.
- To override the default yellow-text tooltips, override `cGZWin::GetToolTipsWindow()`. Create a new subclass of `cGZWin`, and return instances from `GetToolTipsWindow()`. Tips:
 - Any window can be a tooltip! There are some performance considerations below, though.
 - Be sure to `AddRef` the tooltip window you return enough times before returning it! The window manager will call `Release` when it finishes with the tooltip window.
 - Override the `GZPaint` of your new tooltip class, like any window [actually, any window can be a tooltip "for free"].
 - The win mgr. will resize the window as it motors you up (if it motors you up...) so make sure you don't do expensive things when the window changes size, and can survive becoming arbitrarily small in height. If it doesn't motor you (for whatever reason), it uses `GZWinMoveTo`.
 - Assume nothing about the existence of a parent window for the tooltip. Don't assume a parent window exists, or does not exist.
 - Don't `ChildAdd` the tooltip to the window you want it to popup over.

Trottier, Chris

From: Mackraz, Jim

Sent: Monday, November 02, 1998 7:18 PM

To: Trottier, Chris

Cc: Doornbos, Jamie; Barrett, Patrick; Mackraz, Jim

Subject: Create OMK changes to Database

I merged in my changes to the OMK-generation form scripting:

NOTE: There aren't any VOX associated with Global.iff, so I couldn't test that part of the processing. Is that where they were supposed to be? I see that two VOX sounds are associated with "Character Global," but it doesn't have a .iff filename in the database (which I'll need).

We should try to meet before or after my 9:30, depending on who (incl. me) makes it in that early. A few kinks need to be resolved, but we should be up and running in no time.

Here are the changes:

I replaced the Sound and Catalog Export reports with hand-tooled VisualBasic scripts.

I did nothing about the Preview button, it (probably) runs the old reports, they should be disconnected or something.

I inhibited the "unchecked means all" capability since it kept screwing me up; I can turn it on, or find a better way to "Select All."

The (new) exporters want to see an environment variable named ACCESSDIR to direct the output. You need to move it from your profile.ksh to your autoexec.bat so that it's defined where Access can see it. Pick a convenient directory (that exists). Use backslashes. Without that variable, it will bitch, then use the current working directory, probably "My Documents"

I had to check the "In Game" field for the Global object, to get it to appear in the scrolling list. I hope this doesn't screw up anything else. If it's supposed to be Character Global, we can add an iff filename to CG and uncheck Global.

I generate a mess of debug output, which I'll leave enabled until we're validated. It should slow things down, and you probably won't ever see it.

(For VOX sounds). I use Sound.IndexBase for the ID, not SoundInstance.Index. Note that the notion of IndexBase is not really needed (there's not a "spread" of indices based on the index base) but maybe the ID should be defined by the sound, rather than by the global sound instance.... I can change it if desired.

I've fixed the catalog bitmap corner problem by making two frames with transparent colored corners (and a transparent middle that uses a different transparent color, blue).

It uses a temporary buffer, whose transparent color is magenta, and blits a frame into it that uses a different invisible color, so the frame can punch holes with magenta.

First it blits the catalog icon bitmap into the temp buffer.

Then it blits the appropriate frame (interruptible or not) on top of that in the temp buffer.

The transparent color of the frame is blue, and the frame is either yellow or gray, and the corners are cut out in magenta.

The blue is transparent, so the icon shows through, the magenta gets blitted on top of the corners of the catalog bitmap in the temp buffer,

then the temp buffer is drawn on the screen with magenta transparent, and volia: the corners of the icon are transparent!

No need to reprocess any of the catalog bitmaps! It was even fun to implement!

Now the designers and artists can replace this placeholder artwork with whatever shapes and colors they decide upon.

The icon frame bitmap is in:

Res\UI\CPanel\Buttons\IconFrame.bmp



It has two frames (sorry about the overloaded word).

The first frame is the frame for the interruptible icons: gray frame, magenta corners, blue inside.

The second frame is the frame for the uninterruptible icons: yellow frame, magenta corners, blue inside.

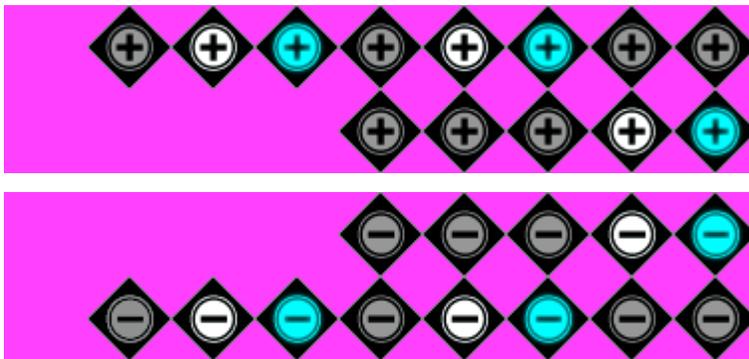
The size of the catalog bitmaps is assumed to be 45x45, and the IconFrame.bmp is double that width since it has two frames.

The view pie menu uses four NiceButtons, that it sets into "manual" tracking mode, and it sets all their states to the appropriate values in response to the pie menu mouse move callback (and before it pops up the menu it sets the initial states). When a NiceButton is in manual mode, you have to set the row and column yourself. Now DDSimsView has a function UpdateViewMenu that's called figure out how to set the button states. There are an odd number of states, but exactly the number needed, thus the special code for figuring it out in manual mode.

The bitmaps for the four view pie menu buttons are in:

Res\UI\CPanel\ViewMenuZoomIn.bmp
 Res\UI\CPanel\ViewMenuZoomOut.bmp
 Res\UI\CPanel\ViewMenuRotateLeft.bmp
 Res\UI\CPanel\ViewMenuRotateRight.bmp

The zoom in and out buttons are divided into nine states (each frame has two diamonds vertically one on top of the other).



The nine zoom states are:

- 0: no zoom possible so invisible
- 1: one zoom possible, one diamond, none highlighted, all dark
- 2: one zoom possible, one diamond, first highlighted light, second dark
- 3: one zoom possible, one diamond, first highlighted blue, second dark
- 4: two zooms possible, two diamonds, none highlighted, all dark
- 5: two zooms possible, two diamonds, first highlighted light, second dark
- 6: two zooms possible, two diamonds, first highlighted blue, second dark
- 7: two zooms possible, two diamonds, first dark, second highlighted light
- 8: two zooms possible, two diamonds, first dark, second highlighted blue

The zoom in button goes below the menu, and has the first diamond on the top, the second on the bottom.
 The zoom out button goes above the menu, and has the first diamond on the bottom, the second on the top.

The rotate left and right buttons are divided into five states (each frame has two diamonds side by side).



The five rotate states are:

- 0: two rotations possible, two diamonds, none highlighted, all dark
- 1: two rotations possible, two diamonds, first highlighted light, second dark
- 2: two rotations possible, two diamonds, first highlighted blue, second dark
- 3: two rotations possible, two diamonds, first dark, second highlighted light
- 4: two rotations possible, two diamonds, first dark, second highlighted blue

Trottier, Chris

From: Doornbos, Jamie
Sent: Wednesday, November 11, 1998 12:09 PM
To: Bowman, Eric; Mackraz, Jim; Trottier, Chris
Cc: MAXIS CTGPROG @ Maxis
Subject: RE: missing sound

I just fixed this by adding a command line flag "dumpassets". It defaults to off and the option "-dumpassets:1" turns it on. It sets the global flag gDumpMissingAssets, which is read by the sound player and the animation player.

At some point we may want to have this output go to a file or something where non-msvc folks can find it.

-----Original Message-----

From: Bowman, Eric
Sent: Tuesday, November 10, 1998 6:32 PM
To: Mackraz, Jim; Trottier, Chris
Cc: MAXIS CTGPROG @ Maxis
Subject: RE: missing sound

Yes, we can cut it down. We don't want all spewage removed, in my opinion, since generally it should be an error (unless I missed a meeting, and I may have) to try and play sounds that don't exist.

-----Original Message-----

From: Mackraz, Jim
Sent: Tuesday, November 10, 1998 6:28 PM
To: Bowman, Eric; Trottier, Chris
Cc: MAXIS CTGPROG @ Maxis
Subject: RE: missing sound

Any hope of cutting down on the spewage triggered by missing files?

-----Original Message-----

From: Bowman, Eric
Sent: Tuesday, November 10, 1998 6:15 PM
To: Trottier, Chris
Cc: MAXIS CTGPROG @ Maxis
Subject: RE: missing sound

It would be good if we could stub sounds out generally. It's hard to debug other things when there is a spew of debug output because of missing sound files.

It's not worth dropping everything this second and fixing, just something to keep in mind for the future.

-----Original Message-----

From: Trottier, Chris
Sent: Tuesday, November 10, 1998 6:06 PM
To: Bowman, Eric
Cc: MAXIS CTGPROG @ Maxis
Subject: RE: missing sound

Can we live with it through Monday? Or do you want a stub sound in the meantime?

-----Original Message-----

From: Bowman, Eric
Sent: Tuesday, November 10, 1998 6:02 PM
To: Trottier, Chris
Cc: MAXIS CTGPROG @ Maxis
Subject: RE: missing sound

Slows things down in a debug build.

-----Original Message-----

From: Trottier, Chris
Sent: Tuesday, November 10, 1998 6:01 PM
To: Bowman, Eric
Cc: MAXIS CTGPROG @ Maxis
Subject: RE: missing sound

Yep. Won't be delivered 'til Friday. What happens when there's a missing sound? Crash? Dialog? Nothing?

-----Original Message-----

From: Bowman, Eric
Sent: Tuesday, November 10, 1998 5:58 PM
To: Trottier, Chris; MAXIS CTGPROG @ Maxis
Subject: missing sound

"/TDSScen/Sounds/door_open.wav"

Trottier, Chris

From: Hopkins, Don

Sent: Tuesday, November 17, 1998 7:57 AM

To: MAXIS CTG @ Maxis

Subject: Head Phaking, phase 1

I've implemented a preliminary cut at head faking, and hooked up the "look at" primitive!
It's not content based yet (it procedurally turns just the head, up to a certain amount), nor have I finished adjusting it, but it basically works!

The ideal content based approach (which we can move to if the current implementation doesn't look good enough) could use an artist-supplied animation of the head (and possibly other bones like the shoulders) turning from the left most extreme to the right most extreme, so the artist could control the extremes and the timing (slowing down the turn as it nears the extremes), but right now those parameters are adjustable constants wired into the code. The head will turn up to 90 degrees to the left or right. If you tell the person to look at something that is not in their range, their head will smoothly turn until it hits the extreme, then smoothly turn back to normal (canceling the look-at mode). If it is within their range, they will smoothly turn to look at it, and track it as they move around. If the object they're tracking is moving as well, it must call the "look at" primitive again and again as it moves, since it just sets a 3 dimensional vector in the person.

I added a test item ("Watch") to the fountain to test head faking, that just makes the person look at the fountain, no matter where they are. We need to enhance the "look at" primitive to have a "cancel look at" command, to make the person stop looking at something. Also it could pass in a few flags to control the behavior, when it finishes looking at something (that is, when it's finished turning and is looking directly at the target), and when it hits an extreme without looking at the target (so the tree code could decide to make a standing person turn around to look at something they're really interested in). Probably it would be simplest to pass those arguments through some new person state variables. The state machine could communicate these events back to the tree code by setting flags in the person state.

The cool thing to do now would be to make the people in the hot tub look at each other!

But it occurs to me that the "look at stack object" command looks at the object's location on the grid, and that might not be the place you expect it to be for the people in the hot tub. Maybe the "look at stack object" code could check to see if the stack object was a person, and if so, scramble around to get the actual location of the person's head or something.

I will hold off checking this stuff in until I'm sure it won't destabilize the build!

-Don

Trottier, Chris

From: Doornbos, Jamie
Sent: Tuesday, November 24, 1998 7:13 PM
To: MAXIS CTG @ Maxis
Subject: content motion

I just finished making the people button bitmaps and relationship icon bitmaps dynamic. A fresh build is needed to use the new content structure.

Changes include:

- A new SPF file for each person in the game. The file contains the 6 column by 3 row bitmap used for the person's selection button and action icon, the 5 by 1 bitmap used to show the degree of the relationships with that person.
- Deleted all the old person UI stuff from Sims/Data. This includes *blasé.bmp, *face.bmp, *rel.bmp, as well as a bunch of things having to do with the old way of framing them on the wall. You all may clean and freshen Sims/Data at your leisure.
- Added 2 files to each non-clone's content directories under \$/tdscontent/sprites. Each directory, dirname, now has {dirname}Face.bmp and {dirname}Rel.bmp. These are copies of the ones that used to be under Sims/Data.
- Wrote a special script, makeicons, which will copy the icons from the content directory to the SPF file for all people. This is how the clones get their action icons, and all the people get their relationship icons. This script is temporary until we know more about how we want to do this.
- Changed game code to not look under Sims/Data for person bitmaps, but instead retrieve from the person's SPF file.
- Made default placeholder bitmaps if expected ones do not exist. The one for the buttons is an upside down mercedes. The one for the relationships is an upside down sigmund.
- Updated person records in the data base to have a name entry in the text tab and a thumbnail entry in the pixel art tab. Mercedes also has a new type of pixel art, "relationship icon", which I was using in an attempt (unsuccessful) to modify the catalog query to deal with two bitmaps.

In addition, the people's names that appear in the tool tips are now the **catalog** name and not the object name. So they may be changed by the export process and be different from the object names. I went ahead and did the ones for the people in the data base, but did not add all the other people.

Issues:

- Do we need separate relationship icons?
- If so, how do we get the data base to export relationship icon names in addition to the thumbnail icon name? Jim probably has answer to this.
- Do we want data base entries for all the people, including clones? If so, how do I copy a record?!!!

Once the issues are resolved, I'll be able to attach people to the export/import process so that they work just like the objects, except they have 2 bitmaps.

Trottier, Chris

From: Doornbos, Jamie
Sent: Tuesday, December 01, 1998 3:41 PM
To: MAXIS CTG @ Maxis
Subject: dynamic families!

OK, now the people that appear in the live panel are dynamic. As a test, I made House 6, above and to the right of "Money Doesn't Grow on Trees", have a test family consisting of Sam and the Colonel.

Fresh code is required to load the new House 6 (though a release build will probably just play weirdly).

Synopsis of dynamism:

- Each family has a name, a number, and a list of characters. The number is automatically assigned and may not be changed.
- The file Neighborhood.iff (in `$/tds5/tdssc`) contains all the saved families, indexed by number.
- Each house has a "Current Family" number that is stored in the Sim Globals for the house. The family number may be edited directly using `edith`, and then, upon save and reload, the house will have the new family.
- If a house has family number 0 or an invalid family number, the "Default" family is used. This is what it always was, the 3 characters. This family may not be deleted.
- 3 non-default families currently exist in Neighborhood.iff: Girls, Just Ross, and Tester.
- The Neighborhood editor now has some additional editing tools:
 - A list of families at the top right.
 - Right click on family name to bring up family menu. Right now this has only the "Edit Name..." option, which brings up a dialog to edit the name.
 - "New Family" button. Creates a new family. It appears immediately in the list, but has no name.
 - "Delete Family" button. Deletes the selected family. Disappears from list immediately.
 - A list of family members for the currently selected family at the bottom right.
 - "Add Member" button. This adds the selected neighbor (one per person type, in the center list box) to the selected family.
 - "Remove Member" button. This removes the selected member (from the selected family).
 - "Save" button. For convenience. Normally neighborhood is only saved when a house is saved. But with this button, you can save the neighborhood without having a house file checked out of sourcesafe.

Some likely misbehaviors:

- User deletes a family member from a family that is already residing in a house. The person will become a visitor on next load. At least you can tell them to leave.
- Family is changed from install and house file is "exported" and reopened on a fresh install. It will use the installed family for the house number and make all people *not* in that family visitors.

Code changes:

- Class Neighborhood now manages a vector of Families. The vector is loaded and saved in its entirety whenever the neighborhood is saved and loaded. This is inefficient when only the family for the *current house* is required, but makes the family editing interface a cinch. Families are quite small, so I doubt the inefficiency will ever be a problem.
- Class House keeps a pointer to one of the families (no new or delete).
- A new, simple class, FamilyMember, just has a guid and a pointer to a `cXPerson`. If the pointer is NULL, the person is either dead, or otherwise not in the house. TODO: add a dead

variable to this so we can gray out the picture in the family when a person dies (as per spec, of course).

- Class Family has a vector of FamilyMember, and takes care of setting the instance pointers when something significant changes.
- Class Family also updates the relevant fields in a person whenever something changes. E.g. the “family number” field is how some behavior trees determine if a person actually lives in the current house (family number == global family number), so when a family number changes and the house is reloaded, these numbers must be set.
- Class Family no longer inherits from Commander. Instead, it has a routine, MyDoCommand, which is called only on the currently active family. This is only for efficiency and may be revisited. DoCommand is called for each commander by GlobalDispatch, which is called fairly often.
- Class Family has new methods for adding and removing members, and is re-implemented to use the member vector.
- Class PersonFinder now implements all of its house stuff using the Family from House::GetFamily() instead of wrapping global arrays.
- PersonFinder now has a dynamic array of PersonInfo, instead of static. Thus it now also has an Init function, which fills up the array with all the current people from the current ObjectFolder.
- Bug fix: WinPeople::Init no longer relies on PersonFinder::CountPeopleInHouse returning the largest possible value at init time. Discovered this since it now returns 0 at init time.
- Class CNeighborhoodDialog wraps new Neighborhood and Family functionality as mentioned above.

Code TODO:

- Migrate PersonFinder and PersonInfo to PersonProxy. Stash a proxy pointer in each ObjSelector which is a person type. Also stash array of pointers to be indexed by integer.
- Figure out neighborhood directory scheme.
- Implement “NewUserCharacter”, probably in class ObjectFolder.
- Revisit house export in light of families. Will require export mode in order to save extra family info. Perhaps wait on this until we have custom characters to solve both at the same time.

Trottier, Chris

From: Doornbos, Jamie

Sent: Tuesday, December 08, 1998 9:19 PM

To: MAXIS CTGPROG @ Maxis; Trottier, Chris; Wright, Will

Subject: persistent person fields

I just finished making some of the person data fields persistent. That is, their storage has been moved out of house files and into the neighborhood file. The data is copied into the actual person when the person is created or loaded and copied back when the person is saved.

The current values will be preserved, but the first time a person is saved, the persistent storage is initialized, and from there on all instances of that person will have the same values.

The values will be edited by the design-a-person screen and sometimes by the game. If we need to edit them by hand before that, they may be edited by setting the values in a person instance and saving the house (with the neighborhood file checked out).

The person's 'init traits' tree will be less important now. It is still needed for gender, since that cannot be changed by the design-a-person screen.

The fields that are now persistent are the personalities, skills, interests, and age. More may be added easily.

Trottier, Chris

From: Doornbos, Jamie

Sent: Wednesday, December 09, 1998 6:01 PM

To: MAXIS CTGPROG @ Maxis; Wright, Will; Barthelet, Luc

Cc: Trottier, Chris; Ryan, Kana

Subject: mood average

I just added code to make the happy score use a set of piecewise linear contribution curves.

There are seven such curves, one for each relevant motive. To get the happy score, the contributions are added in for each motive, and the total is divided by the number of curves.

The values are currently set up to be the same as a direct average:

```
mHunger
^(-100,-100) (100,100)^
mComfort
^(-100,-100) (100,100)^
mHygiene
^(-100,-100) (100,100)^
mBladder
^(-100,-100) (100,100)^
mEntertained
^(-100,-100) (100,100)^
mEnvironment
^(-100,-100) (100,100)^
mSocial
^(-100,-100) (100,100)^
```

The shape of the curve is just a line connecting the points from smallest x to largest x, with infinite flat segments on either side.

In order to get a different weighting, the y values should be multiplied by the weight, but the weights should always sum to 7 (the number of curves). Theoretically, this constraint doesn't restrict what can be done with the linear curves, but we could also add an extra number if it's too hard to edit.

Each curve may contain up to 8 points (easy to change in code) with floating point components, and cannot specify any vertical curve segments. Points do not have to be sorted by X, though it's easier to read.

The points used by the game may be edited in the text file

```
$/tds5/tdsscen/global/global.dir/#500#HappyContributionCurves.cst
```

A restart is required to use the new points.

Note that anything outside of ^^ in the CST file is a comment, and does not affect the curves.

Trottier, Chris

From: Hopkins, Don

Sent: Wednesday, December 09, 1998 4:33 PM

To: MAXIS CTG @ Maxis

Subject: Recording & playing back character animation

I've added a character animation recording feature to the Animation dialog in Edith!

The Animation dialog lets you view all the different loaded animations on any skeleton with any suit. Now it has a "Record" button at the bottom, as well as a menu to select which character to record, and a text/spin numeric field to specify how many ticks to record.

Select a character, modify the number of ticks to record if you want, and press record. A new skill is dynamically created and added to the scrolling list of skills, named "!<character name>-<id>", like "!ross-0" or "!mercedes-1".

It records the full body motion of the character for the duration of the tick counter, the end result of mixing all skills and applying the head faking.

The ticks in the record duration field count down to zero, and when it's zero, it stops recording. You can then play back the new skill you've created on one of the demo skeletons!

I will put more playback controls in, so it's possible to precisely single step and examine every frame of animation, as well as an event log.

I will also record events like the beginning and ending of every skill it plays, and other interesting events like xevents and footsteps, so we can analyse after the fact what caused glitches in the animations.

Right now the base coordinate system of the person is not recorded, so the playback is relative in place and the feet slide when walking.

I will teach it to record the absolute person position (or displacement and rotation of the person relative to the start of the animation) in another track so you can play that back and analyze it as well.

-Don

From: Hopkins, Don
Sent: Thursday, December 10, 1998 8:33 AM
To: MAXIS CTG @ Maxis
Subject: recording and playing back character animation

The edith character animation browser dialog now supports frame by frame playback and new speed control buttons.

It has a text field with the frame number, and a spin control that increments and decrements the frame number.

And there are three buttons for playing backwards, halting, and playing forwards.

So you have much better control over the playback of any practice, including practices you record from the characters!

There's an event log list now, but it's not hooked up yet. It will let you scroll through all the events in the animation.

And when you record some character animation, it will inject all kinds of informative events into that event stream,

like begin and end animation names, blending info, footsteps, xevents, etc.

Next step is to dynamically make up an extra bone to represent the base translation and rotation, containing the normal root of the skeleton, and record the vitaboy position in that track, so when you play it back it remembers the position and rotation of the body (which normally isn't represented by a bone, but making a fake bone to represent the outside position and rotation of the whole body, and recording a motion track for that, seems like the cleanest way to keep track of it.)

-Don

From: Mackraz, Jim
Sent: Wednesday, December 09, 1998 2:48 AM
To: Ryan, Kana
Subject: FW: sim log

-----Original Message-----

From: Doornbos, Jamie
Sent: Tuesday, December 08, 1998 2:36 PM
To: Barthelet, Luc; Mackraz, Jim
Subject: sim log

I've been working on the simulation log and have the framework in place for logging stuff. Here is basically how it works.

An **interaction sample** is a collection of statistics, including the elapsed time, and motive deltas.
An **interaction log** is an array of samples for successfully completed interactions.
The **simulation log** is everything needed to do the logging. It keeps two collections:
A collection of interaction samples indexed by person.
A collection of interaction logs.
After each sim tick, a person passes control to the simulation log. The log looks up the current sample for that person to see if the current interaction has changed. If the interaction has changed and the last interaction succeeded, it computes the delta of the motives and adds the sample to the collection of interaction logs. If the interaction has not changed, it adds to the tick counters based on the current primitive.

Some problems for which we may need to get fancy:

All distinct entry points (=interactions) are tracked, but some objects define two entry points for what is conceptually the same interaction. E.g. the social object has "converse" and "join conversation".
At the top level, both interactions just call the same sub-tree. Perhaps we could collapse certain interactions in processing the log.
Interactions may not affect motives directly. E.g. the chair affects the comfort motive after the interaction is over.
Interactions that invoke behavior in other objects to get the motive effect could be confusing. For example, the Refrigerator's "Have A Meal" eventually helps the hunger motive, but it is actually affected by the generated food object.
Object and person state may drastically affect the interaction. E.g. Stereo has different effect depending on the person's variables and the station.
The motive engine effects are not easily subtracted out, thus interaction samples have slight negatives on most of the motives.

Here is a sample output of the log. It's just a text file output from sims.exe and converted to excel by hand. Keep in mind that the weighted mood average is not yet implemented. Also, I figured it would be pointless to try and combine the samples in code, since we'll want to show deviations and perhaps a correlated curve, and mathematica is so good at that.

Trottier, Chris

From: Hopkins, Don
Sent: Thursday, December 10, 1998 5:58 PM
To: Mackraz, Jim; MAXIS CTG @ Maxis
Subject: RE: recording and playing back character animation

I've got it playing back the character animations in place, where they were recorded. The "super root" bone trick worked, now I'm dynamically adding an outer bone for positioning the playback skeleton.

I can record ross getting into the hot tub, then play it back with a naked sam suit! It's kind of close to being able to do what you say Luc wants (like mario kart recording your best ride and playing it back like a ghost) modulo the object interactions, which would have to be dealt with at a higher level.

I discussed with Jamie how we could record object graphics state changes in the animation stream.

(For debugging an analyzing animations, not for full in-game journal/playback.)

The "update" primitive is called whenever an object's graphics state changes. It can look at the recording person and figure out if they are interacting with that object (the person has some private state recording which objects they are interacting with, and I can expose a `IsInteractingWith` method, and write the update handler so it records graphic state change events for all tiles of a multi tile object that the person is interacting with. The goal is to get things like the tub to fill up properly when playing back the animation of somebody filling it up, so the artists can test out their animations, and single step through the frames and events to see exactly when what is happening.

-Don

PS: Speaking of nudity: for xmas, you should get Barb one of those IR sensitive cameras that can see through peoples clothes. They were taken off the market, but I'll bet you can pick one up on ebay.com!

-----Original Message-----

From: Mackraz, Jim
Sent: Thursday, December 10, 1998 3:32 PM
To: Hopkins, Don
Subject: RE: recording and playing back character animation

So, can you envision what it would take to make journal/playback (w/ menus inhibited) a feature in the game?

A couple of thoughts:

- Luc wants this
- It's not an immediate priority
- If there's something spoofy needed from object land, Jamie has demonstrated massive spoofability lately with his interaction logger. We could rely on him after vacation to perform a miracle as needed.

Please don't dive in and code this up, by the way...

We should look at the various lists to find you something meaty to do, after the animations are smooth as glass...

Jim

Ps: I'm on a toy buying binge. I just got a Fuji digital camera (still figuring it out) and a DVD player. Now I'm shopping for a computer, a car, and a house rebuild. Do not confuse this activity with any reasonable hope of my affording it all... But the camera is way cool... I'll whip it out in the office as soon as I get the (backordered) floppy adapter to suck pix out of the SmartMedia flash wafer. Oh, yeah, I also got Barb some trick binoculars for xmas.

Toyz for Boyz.

-----Original Message-----

From: Hopkins, Don
Sent: Thursday, December 10, 1998 3:20 PM
To: Mackraz, Jim
Subject: RE: recording and playing back character animation

Uuuuh. as Clinton might phrase it, movie-style record/playback is a step in the direction of supporting debugging animation glitches. :-)
The idea is to capture lots of useful debugging information in the note tracks, and be able to step through while looking at the animation to see what happened.
I'm making it so you can move the person around when playing stuff back, so you could position them in front of an object they're supposed to be using.
It would make sense to hook up a mechanism for setting object states, or recording the object state changes in the animation stream so you can play the effects back at a high level.

-Don

-----Original Message-----

From: Mackraz, Jim
Sent: Thursday, December 10, 1998 9:37 AM
To: Hopkins, Don
Subject: RE: recording and playing back character animation

Is this work to support a goal of debugging animation glitches, or a step in the direction of having movie-style record/playback?

For the latter, we're going to need to sync up the object states and animations (state transitions).

-----Original Message-----

From: Hopkins, Don
Sent: Wednesday, December 09, 1998 11:33 PM
To: MAXIS CTG @ Maxis
Subject: recording and playing back character animation

The edith character animation browser dialog now supports frame by frame playback and new speed control buttons.
It has a text field with the frame number, and a spin control that increments and decrements the frame number.
And there are three buttons for playing backwards, halting, and playing forwards.
So you have much better control over the playback of any practice, including practices you record from the characters!
There's an event log list now, but it's not hooked up yet. It will let you scroll through all the events in the animation.
And when you record some character animation, it will inject all kinds of informative events into that event stream,

like begin and end animation names, blending info, footsteps, xevents, etc.

Next step is to dynamically make up an extra bone to represent the base translation and rotation, containing the normal root of the skeleton, and record the vitaboy position in that track, so when you play it back it remembers the position and rotation of the body (which normally isn't represented by a bone, but making a fake bone to represent the outside position and rotation of the whole body, and recording a motion track for that, seems like the cleanest way to keep track of it.)

-Don

Trottier, Chris**From:** Doornbos, Jamie**Sent:** Tuesday, December 15, 1998 2:18 PM**To:** MAXIS CTGPROG @ Maxis; Trottier, Chris; Ryan, Kana; Curtin, Claire; Wright, Will; Wolosenko, Roxy**Subject:** evict, move in, and move tool

I just finished doing the evict and move in functions and some changes to the move tool, with Don's help. It's pretty close to the real deal, basically just missing the locked tile functionality.

Evict

Here's what it does:

Deletes all people in the house.

If bulldozing, deletes all build mode objects.

Deletes all other objects that are flagged as 'should be deleted in evict mode'.

Here's what it doesn't do:

Leave the road tiles and sidewalk tiles. Since the user should be able to lay sidewalk tiles on the lot, I suggest this be implemented through the locked tile mechanism. Bulldozing would not destroy the floors on tiles that are locked.

Move in

Causes the pictures of the family members to appear in the live mode panel for that house (this was already working). The sim globals dialog may be used to do two things:

Inhibit moving in. For houses that are tutorials, or are just for looks, or whatever.

Set the price of the lot. This must be a multiple of 1000.

The net worth of a family is not yet being computed.

Move Tool

The move tool now restricts what may be picked up and moved. To toggle the constraints, the '^' (shift-6) key may be pressed. Here are the constraints:

If the object is not flagged as 'can be moved by the user', then it may not be picked up.

If someone is interacting with the object, it may not be picked up.

If someone is sitting on the object, it may not be picked up.

All other objects may be picked up.

Object flags

These objects' flags were updated to not allow user to pick them up:

Ash

Destination

Duck

Fire

Flood

Puddle1

Trashpile

Outside

Pedportal

Phoneline

Scheduler

Trashoutside

These objects' flags were updated to not allow them to be deleted by the evict function:

Outside

Pedportal

Phoneline

Scheduler

Trashoutside

Build Mode

A new build mode attribute was added to objects. Now the buttons in the architectural subpanel automatically include newly create trees and such. The following objects were set to have a build mode:

Door1

Door2

Window1

Window2

Column1 (does not yet appear in panel)

TreeApp

Hedge

FlowersWild

FlowersDaff

Stair

Trottier, Chris

From: Doornbos, Jamie
Sent: Tuesday, December 15, 1998 6:10 PM
To: MAXIS CTGPROG @ Maxis; Trottier, Chris; Ryan, Kana; Wolosenko, Roxy; Curtin, Claire; Wright, Will
Subject: net worth, friend count

Just finished a first pass on the net worth and friend count. Seems to be working except for some problems with object depreciation.

Family net worth is broken down into a sum of **budget** and **objects value**. Budget is just the number that appears in the control panel when that family is being played. For unhoused families, the objects value is 0. For housed families, the objects value is the sum of the value of all the objects in the house.

Object depreciation seems to be broken for some reason. It seems that some object's have their depreciation limit set to be the same as the price. Perhaps a catalog export will fix it. I'll be checking that out tomorrow.

Net Worth

Here's the rules that I think give use the result we want:

- Whenever a family is created, it's budget is set to 20000, and it's objects value to 0.
- Whenever a family is evicted, it's budget is set to it's net worth, and it's objects value to 0.
- Whenever a family is moved in, it's budget is set to it's budget minus the cost of the lot.
- Whenever an occupied house is saved, the objects value of the occupying family is set to the sum of all the values of all the objects which are deleted under evict mode (see e-mail on eviction).
- Whenever an occupied house is saved, the budget of the family is set to the global budget.
- Whenever an occupied house is loaded, the global budget is set to the family's budget.
- Whenever an unoccupied house is loaded, the global budget is set to 0.

One issue is whether or not moving a family into a house and immediately evicting them can increase their value. That is, are there pre-furnished furnished houses? Currently, this is the case with most houses in the neighborhood. In this case, the furniture cost must be rolled into the lot cost, and a transfer from lot cost to family's objects value must occur immediately after move in. The reason I didn't implement this is because it would require another load and save when a move in is performed.

Friend Count

- Whenever the neighborhood is saved, all the friends of all the families are recounted. The neighborhood is saved when any house is saved and after any operation in the neighborhood window that affects a family. Thus deleting a family may case the friend count to go down in another family.

Trottier, Chris

From: Doornbos, Jamie

Sent: Wednesday, December 16, 1998 11:16 AM

To: MAXIS CTGPROG @ Maxis; Ryan, Kana; Trottier, Chris; Wright, Will; Barthelet, Luc

Subject: Changes to the sim log

For the next build.

I just added a person identifier to each interaction sample. The name of this person appears in the last column of the sample printout in the column "Person Running". At the end of the printout is a list of people and relevant data fields.

Also, I think I forgot to mention to y'all how to actually do the logging. Press the '#' key to start logging. Press it again to stop the logging. There is now a dialog that comes up to confirm that the file was written successfully.

-----Original Message-----

From: Doornbos, Jamie

Sent: Tuesday, December 08, 1998 2:35 PM

To: Barthelet, Luc; Mackraz, Jim

Subject: sim log

I've been working on the simulation log and have the framework in place for logging stuff. Here is basically how it works.

An **interaction sample** is a collection of statistics, including the elapsed time, and motive deltas.

An **interaction log** is an array of samples for successfully completed interactions.

The **simulation log** is everything needed to do the logging. It keeps two collections:

A collection of interaction samples indexed by person.

A collection of interaction logs.

After each sim tick, a person passes control to the simulation log. The log looks up the current sample for that person to see if the current interaction has changed. If the interaction has changed and the last interaction succeeded, it computes the delta of the motives and adds the sample to the collection of interaction logs. If the interaction has not changed, it adds to the tick counters based on the current primitive.

Some problems for which we may need to get fancy:

All distinct entry points (=interactions) are tracked, but some objects define two entry points for what is conceptually the same interaction. E.g. the social object has "converse" and "join conversation". At the top level, both interactions just call the same sub-tree. Perhaps we could collapse certain interactions in processing the log.

Interactions may not affect motives directly. E.g. the chair affects the comfort motive after the interaction is over.

Interactions that invoke behavior in other objects to get the motive effect could be confusing. For example, the Refrigerator's "Have A Meal" eventually helps the hunger motive, but it is actually affected by the generated food object.

Object and person state may drastically affect the interaction. E.g. Stereo has different effect depending on the person's variables and the station.

The motive engine effects are not easily subtracted out, thus interaction samples have slight negatives on most of the motives.

Here is a sample output of the log. It's just a text file output from sims.exe and converted to excel by hand. Keep in mind that the weighted mood average is not yet implemented. Also, I figured it would be pointless to try and combine the samples in code, since we'll want to show deviations and perhaps a correlated curve, and mathematica is so good at that.

Trottier, Chris

From: Bowman, Eric

Sent: Wednesday, December 16, 1998 7:47 PM

To: MAXIS CTG @ Maxis

Subject: Cheats 'R' Us

I just checked in a new cheat-code manager!

Within the game, type shift-ctrl-c. A little text widget will appear, into which you may type a cheat. After you have typed the cheat, press <Enter> Either the cheat worked, or you will get a dialog telling you (hopefully) why the program couldn't understand what you typed. Cheats are case-insensitive, and the "tokens" are separated by spaces.

There aren't very many cheats yet! Here are the ones I implemented:

aa [on|off]
lamps [on|off]
shadows [on|off]
money [amt]

"aa" turns on or off anti-aliasing of sprites.

"lamps" turns on or off the expensive multi-texturing of floors and walls near a lamp

"shadows" turns on or off shadows under objects

"money" lets you set the simulator's "funds available".

I threw away the old cheat code manager, which I never could figure out anyhow, and made the world simplest cheat code manager. Basically it just maps a string to a function pointer and a value, and calls that function, passing in what the user typed and that value. Different programmers can have different cheats.

Programmers: look in `msrc/graphics/graphicscheats.cpp` for the "canonical" cheat callback routine.

From: Bowman, Eric
Sent: Thursday, December 17, 1998 11:00 PM
To: MAXIS CTG @ Maxis
Subject: How the neighborhood works

Due to massive & widespread confusion, some explanation is in order.

Things have changed in TDSScen. There is a new directory called Neighborhood, with 2 subdirectories, Houses and Characters.

In the Neighborhood directory, there is a file neighborhood.iff. This file keeps track of all the people and families. So when you create a new family and characters, that file gets modified. Periodically, people will check it out of SourceSafe to build "the canonical neighborhood."

When you create a new character, a file is created for that character in the Neighborhood/Characters directory. Character files must also be checked in to SourceSafe when the neighborhood file is checked in.

A house file only gets modified if you evict or move in to the lot or house corresponding to a particular house file (or play the house). [Later today, the roll-over popup for lots & houses will tell you which house file a given lot maps to.]

The game unlocks the neighborhood file and the house files, so interacting with SourceSafe is a little different than it used to be. Now, you can always save houses & the neighborhood from within the game, regardless of whether the files are checked out from SourceSafe. So if you want to check the files *in* to SourceSafe, you need to check the "Don't Get Local Copy" checkbox in the check dialog in SourceSafe if you didn't check out the files before saving them, to prevent SourceSafe from overwriting the changes you've made to the neighborhood or house files!

It's a brave new paradigm...

Trottier, Chris

From: Hopkins, Don
Sent: Friday, December 18, 1998 5:58 AM
To: Hopkins, Don; Mackraz, Jim; MAXIS CTGPROG @ Maxis; Barthelet, Luc
Cc: London, Charles; Hedman, Eric; Ryan, Kana; Trottier, Chris
Subject: Animation floating point delta histogram

I've fixed up the database, and a few of the Max files!
I wasn't able to check out all the Max files, so I just fixed local copies, but the fixes are as follows:

Remove sound from: adult-aquarium1-feed adult-aquarium1-clean adult-tub1-turnon

Remove persistent sprite exporter plug-in data from: adult-pooltable-shoot adult-pooltable-idle

The way I removed the sounds was to load the file, dismiss the warning dialog (which was halting the batch export), and save it back out again.

Getting rid of the persistent sprite exporter plug-in data was more difficult.

I had to reset Max, and merge the files, including everything but the persistent data. Then I saved it back out over the old file.

It's an invisible object that you can't select from the normal object window, but it does show up in the list of objects you get when you merge.

I had to turn a few animations in the database off, since there were no max files for them.

Like the global floral animations. And there were a few other duplicates.

I had to rename the directories of lots of the animations, which had changed, typically like from "Foo1" to "FooC".

Now the batch exporter can handle everything in the database, without human intervention.

I fixed the exporter to compute a histogram of all of the floating point numbers it compresses.

It's actually a histogram of the differences between consecutive floating point numbers.

The compressor should be tuned so it covers the dense part of the range well.

Here is a summary of the histogram resulting from exporting all animations in the database.

Histogram of 3082915 floating point differences ranging [-6.02747 .. 6.69702],

Quantized to 1001 buckets ranging [-2 .. 2], bucket width 0.003996.

There are little blips around -1.406593 and 1.414585, i.e. $+\sqrt{2}$,

and -0.707293 and 0.707293, i.e. $+\sqrt{1/2}$,

and even -0.631369, -0.139860, 0.131868, 0.631369, 0.775225 (anybody recognize those numbers?).

There are big spikes at +1.0 and -1.0, with a lots of samples around [-1.002997 .. -0.967033], and [0.967033 .. 1.002997].

And of course the biggest spike is at zero, with a well populated region around [-0.083916 .. 0.075924],

and really concentrated around [-0.015984 .. 0.011988].

Here's the raw data:



AnimationHistogram.txt

I'll tune the compressor table and tolerances based on this data.

Its table can hold any set of differences, so I can include the popular magic numbers, as well as the region around the center, and the spikes and areas around -1 and +1.

-Don

Trottier, Chris**From:** Doornbos, Jamie**Sent:** Tuesday, January 05, 1999 1:19 PM**To:** MAXIS CTG @ Maxis**Subject:** new cheat stuff

I added a feature to the cheat code manager that allows the last cheat to be repeated with the same parameters by typing a single exclamation point in the cheat code text box. The command may also be repeated with different parameters if more text is typed in after the exclamation point.

For example, the following lines typed into the cheat text box, in order, will have the stated effects:

```
draw_routes on          -- turns on route drawing
! off                  -- turns off route drawing
grow_grass 20          -- grows the grass by 20
!                      -- grows the grass by 20
! 30                   -- grows the grass by 30
```

I moved some of the cheats that were under direct keyboard control into the new cheat paradigm. Here are the new cheats and a description of each.

draw_routes [on|off]

Turns on or off the drawing of the little colored sprites on each point of the selected person's path. No longer toggled by the tilde key, '~'.

draw_origins [on|off]

Turns on or off the drawing of the colored sprites underneath a person's origin and glued feet. No longer toggled by the backward accent key, '¨'.

draw_floorable [on|off]

Turns on or off the drawing of the floorable grid on upper floors in build mode.

write_routes [on|off]

Turns on or off the code that dumps an RTE file to the application directory on every generated route. No longer toggled by the exclamation key, '!'.

sim_log [begin|end]

Starts and stops the simulation log. An error is given if used when the log is already in the target state. No longer toggled by the pound key, '#'.

grow_grass [amount]

Grows the grass by the given amount. An error is reported if the amount is anything but digits. The lowercase 'g' key still grows the grass by 1.

From: Doornbos, Jamie

Sent: Thursday, January 07, 1999 1:33 AM

To: MAXIS CTGPROG @ Maxis; Ryan, Kana; Wright, Will; Trottier, Chris

Subject: more cheats

move_objects [on|off]

This turns on or off the ability to move all objects. This needs to be turned on for lot editing so that special objects such as trash cans and ped portals may be moved.

map_edit [on|off]

This is a preliminary version of a tool and a view that will be used to edit the ground tile properties of the lots. Each tile is on or off, based on a tile property. Properties may eventually include whether or not the terrain on a tile may be edited, and whether or not an object may be placed on the tile. For testing the tool and view, only one property is currently available, and just corresponds to an unused flag in the existing flags layer. When map editing is on, all tiles have a red stipple overlay. Tiles that are *on* also have a white stipple and tiles that are *off* have a black stipple. Clicking on a tile inverts its on/off state, and dragging paints with the new state. Shift-click inverts a tile's on/off state, and dragging (with or without shift key held), paints a rectangle of the new state from the start tile to the tile below the mouse. If the control key is held when the mouse is released, the changes since the click are undone. Eventually this cheat will be "map_edit [off|property]", where property is something like "terrain" or "place".

From: Bowman, Eric
Sent: Thursday, January 07, 1999 1:33 AM
To: MAXIS CTG @ Maxis
Subject: new features

Two new cheats:

"help" brings up a dialog showing all available cheats. Someday we will incorporate Jim's idea and have a usage string in there as well...

"grid on" and "grid off" turn the grid drawing on or off

Also, when drawing a thumbnail, the terrain is turned on (for Mr. Chin), with the grid off.

From: Bowman, Eric
Sent: Saturday, January 09, 1999 1:32 AM
To: MAXIS CTG @ Maxis
Subject: new cheat & other features

I got down & funky last night on the laptop.

New cheat system features.

You can now:

type 'help' to see all available cheats

type 'help [str]' to see all cheats that start with [str].

Example: typing "help m" displays:

map_edit - Useage: map_edit [on|off]

money - Useage: money [amt] - sets current funds to amt

move_objects - Useage: move_objects [on|off]

all cheats now include a useage string so you can tell how to use them.

You can now type multiple cheats on one line, separated by a ";" (ah, strtok, how I love thee).

The ! history tracks the last command in lines with multiple commands

Scrolling damage glitch fix. There is still a problem sometimes when you switch levels sometimes; I haven't looked at that closely yet. It's hard to reproduce.

Yes/No dialog boxes now respond to user pressing 'y' or 'n' (how irritating was *that?*)

Pressing Enter or Esc (or 'y' or 'n') in a dialog now makes the corresponding button go through it's mouse down/mouse up cycle. This turned out to be trivial, since the effect was pioneered when I made the dialogs auto time-out.

Fixed a tooltips bug (after playing awhile, tooltips would stop appearing...turned out to be a bad state change).

Removed some compile-time dependences on houseviewer.h

Fixed bug where moving mouse over control panel was triggering dynamic cutaway

Fixed a mouse-move chain-of-command bug that was breaking scrolling cursor changes over the control panel.

Fixed what was triggering an assert in the thumbnail generator in debug builds.

Trottier, Chris

From: Doornbos, Jamie
Sent: Monday, January 11, 1999 6:37 PM
To: MAXIS CTG @ Maxis
Subject: decoupling

You can try it out in tomorrow's build with the toaster oven and any counter.

The hardest part was figuring out how to make all the old objects work normally without editing a ton of OMK files (for slot configuration). I think I changed all the bits that needed to be changed, but **please be on the lookout** for bugs relating to object placement (including people sitting or standing on or in things), as some bits may have been overlooked. The main manifestations of such bugs are objects that cannot be placed where they should be able to be placed, and people that abort an interaction after they arrive at the object. I already tested chairs, couches, the toilet, the tub, and a standard food chain situation.

Conversion

In order to de-couple an existing appliance:

- Programming: change the object's init tree to clear the "ground" bit and set the "counter" bit (see below).
- Art: re-export the object graphics with no counter underneath and run cbcleanspr.
- Production: pickup and delete the object where it occurs in saved houses and replace with a counter and a new object.

Known problems

- Appliances cannot be picked up. This is due to a small bit of move tool code that assumes the user will always want to pick up the bottom object, even when pointing at a contained object. I see no immediate impact of removing the code, but need to verify with Don before removal. (Don, please refer to lines 562 - 566 in MoveTool.cpp.)
- Appliances do not rotate automatically when being placed. The low tech solution to this is to let the user figure it out. I think this is adequate for appliances, since it's only one extra click, and there's not really any point in limiting the sides of a counter that an appliance may face.
- Appliances do not rotate when counter rotates. This could be fixed by caching the counter to appliance directional offset when the counter is picked up, and updating the appliance rotation when the counter is rotated. Not too hard but definitely icing.

How it works**Object code**

All object slots (locations on top of other objects) have an associated height field which can take on any one of the following values:

- Undefined
- Ground
- Low table
- Table
- Counter
- Non standard

The altitude offsets of the standard heights are hard-wired, so that changes to the standard heights are automatically global to all objects. The undefined height is automatically converted to one of the other types when the slots for an object are loaded. If an undefined height has an altitude offset, like the "inside the fridge" slot, it becomes a non-standard height. If an undefined height has a zero offset, like a "sit on chair" slot, it becomes a ground height slot. This is how old objects are made to work correctly since old object slots start with an undefined height. Objects that do not define any slot automatically get a ground height slot.

Each object has a set of bits that indicate which standard heights the object may be placed at. The bit for Undefined height is illegal (actually it doesn't exist, since it's value would be $1 \ll -1$). All objects in old saved houses get the bit for ground height set upon loading. Thus, all saved objects will be in a legal location. All new objects get the ground bit set by default, then certain objects disable it and/or enable other bits. For example, the food enables the table, counter and non-standard bits. That way, the food may be placed inside the fridge. Appliances will be clearing the ground bit and setting the counter bit.

Finally, in the object placement code, the height of the attempted slot is matched against the bits of the object being placed, and the placement fails if they don't match.

Move Tool code

No changes to this code. The string "Must be at a different height!" was added a while ago, but until now has not been shown.

Mouse object code

There are two new parts to this code. Both parts are invoked only if the object being dragged around is not allowed to go on the ground.

1. If the object cannot be placed due to an intersection error, the tile is searched for legal heights to place the object at, and then the object is placed there instead of directly on the ground. Thus if a counter is in the way of a toaster, the toaster will stick to the top of the counter.
2. If the object cannot be placed for any reason, it is artificially elevated to its (first) legal height.

Behavior code and content

- Global object init tree sets the ground height flag.
- Other init trees set the ground flag (door, window, person, destination).
- Food objects enable all height flags.
- Counters (c, x1, x2) now have a counter height slot.
- Table (dinv) now has a table height slot.
- Coffee Table (tablecofm) now has a low table height slot.
- A global constant table called "std heights" exists for the purpose of setting these bits.

By the way

In the process, I removed some old code from the project:

```
SOURCE=..\msrc\tools\AffectObjTool.cpp
SOURCE=..\msrc\tools\AffectObjTool.h
SOURCE=..\msrc\tools\DoorTool.cpp
SOURCE=..\msrc\tools\DoorTool.h
SOURCE=..\msrc\tools\ObjTool.cpp
SOURCE=..\msrc\tools\ObjTool.h
SOURCE=..\msrc\tools\OldFloorTool.cpp
SOURCE=..\msrc\tools\OldFloorTool.h
SOURCE=..\msrc\tools\OldWindowTool.cpp
SOURCE=..\msrc\tools\OldWindowTool.h
```

I did not yet remove them from sourcesafe, since I did not really know if anyone was still using them.

From: Doornbos, Jamie
Sent: Friday, January 15, 1999 1:42 AM
To: Wright, Will; Mackraz, Jim
Cc: Barrett, Patrick; Ryan, Kana; Barthelet, Luc
Subject: RE: minor change to sleep proposed

Here's the new tree for "tweak sleep finished" in both of the beds. The first node is to see if the user woke the person up. This always prevails. The second node keeps them in bed if their energy is below 90. This can be tweaked. The third node keeps them in bed if it's still nighttime.

The sofas' "tweak nap finished" is the same except the person will wake up when their energy hits zero in the day time. I also changed the napping to increase the comfort up to a maximum of 40 for two hours, then start decreasing it until -100.

I also changed the motive contribution curve for energy. There is still a very steep part between -100 and -90, with a 190 point rise in that range. But I added another 5 point rise between -90 and -60. That way, they will take naps without being dead tired.

-----Original Message-----

From: Wright, Will
Sent: Thursday, January 14, 1999 11:57 AM
To: Mackraz, Jim; Doornbos, Jamie
Cc: Barrett, Patrick; Ryan, Kana; Barthelet, Luc
Subject: RE: minor change to sleep proposed

This sounds ok to me, should be simple to try any way. Let's give it a shot.

-Will

-----Original Message-----

From: Mackraz, Jim
Sent: Wednesday, January 13, 1999 5:53 PM
To: Wright, Will; Doornbos, Jamie
Cc: Barrett, Patrick; Ryan, Kana; Barthelet, Luc
Subject: minor change to sleep proposed

Luc's having trouble getting his characters to sleep through the night... Too much caffeine, perhaps. Or stress.

I have a proposed change; if Will wants to bless it, Jamie can you code it? It's a bit out of Patrick's scope, and it would be nice for the *Economic Game* implementation.

Proposed modification: People don't wake up on their own if it's dark outside. More precisely, they don't wake up on their own between two times we can tune, basically dusk and dawn. Once "dawn" arrives, they'll wake up if they're rested, and stay asleep until rested if they need to. Player can still wake them up at any time.

Desired effects:

If a person goes to sleep at night, they'll sleep at least through the night. They might sleep in, past "dawn," if they're "still tired." That way, if a person stays up late, the player has to rouse them (or buy an alarm clock) in order to get them to work, but if you get them to sleep at a "reasonable hour," you're relieved of that burden.

If a person falls asleep midday, they'll wake up from their nap when rested.

If they fall asleep just before dark, they'll probably sleep through the night.

Most people will wake up automatically at "dawn," then, if Luc's experience with the tuning is typical. We could toss in a Zelda rooster sfx at "dawn" if we want. People would wake up simultaneously unless we inject a stochastic variable, but I like the idea of well-rested people all arising at the same time, with slackers sleeping in.

We will have a much better shot at tuning people to go to bed autonomously at a reasonable time (this sort of clamps the drift, in one direction).

I don't know the motive engine code, but it seems that whatever decides to wake them up could just check the time-of-day as one ez condition to accomplish this. Somebody pick good values for "dusk" and "dawn," please.

Jamie, if we get sign off, can you bump this to the top of your queue?

Thanks, all.

Jim

Trottier, Chris

From: Mackraz, Jim
Sent: Thursday, January 21, 1999 12:57 PM
To: MAXIS CTG @ Maxis
Subject: FYI:

Importance: High

FYI (everybody) there is now a script to build a fresh installer without recompiling the entire application.

It might be a good idea for a programmer to go do this today, based on Jamie's email.

It will not eliminate any content files "removed" from sourcesafe (it doesn't purge the build directory).

To invoke it, you go to Versed in my office, open a Korn shell (ksh), and

1. Type: `CD c:/build`
2. Type: `doinstall.ksh` (Note: I can't check from here to see if I remembered this name right!
Just check for most recently edited .ksh file with a similar name)
3. (For a full build, you type: `dobuild.ksh`)

The steps in the build scripts are listed here (with the steps omitted from "doinstall.ksh" in parentheses)

1. date-time stamp to the console
2. make sure we're in the right directory
3. suck in a file full of shell function definitions (buildfunctions.ksh)
4. (delete the entire build directory)
5. get everything fresh from sourcesafe
6. (compile release and release with Edith)
7. create the installer
8. create the self-extracting installation package
9. delete everything in 'dailybld' on the server
10. copy everything to the server, including the installer(s)
11. copy the self-extracting installation package to the zoloff FTP server
12. date-time stamp to the console

-----Original Message-----

From: Doornbos, Jamie
Sent: Thursday, January 21, 1999 11:57 AM
To: MAXIS CTG @ Maxis
Subject: a couple of new things

Today's installer is bad because of a missing CMX file for the spinning arrow. (It's kind of ugly, anyway.) I added the file from Don's machine, so future builds should be OK. Also, the sims.exe from dailybld with new content should work as well. Chris is using yesterday's build with fresh content for the demo. We can make another build today if anyone needs it.

- Enabled spinning arrow over selected character (Don). Disabled flashing blue dot. Currently the arrow is not lit since we need help from Bobo to figure out how to do that. Until then, we may want to consider changing the texture back to the prettier one that it had last week.

- Small routing improvement. Less spinning now. Still looking into other problems.
- ObjectError.txt now has a filename of the form ObjectError_hxx_ty.txt, where xx is the house number, and y is the tick count.

Trottier, Chris

From: Hopkins, Don

Sent: Thursday, January 28, 1999 8:41 PM

To: MAXIS CTG @ Maxis

Subject: More cmx exporter enhancements

Charles and I talked about the CMX exporter, and we decided that it needed to automatically check the files it exports out and in from SourceSafe, when doing a batch export.

So I added an auto-batch-check-out/in feature, and robustified the code that figures out which output files were written, and added a few more options to the exporter.

I added some check boxes to the control panel, to control the new options:

"Generate Reports" to control the generation of reports (the text files) defaulting to off,

"Compress Skills" to control the compression of skills (.bin versus .cfp files) defaulting to on,

"Batch Check Out/In" to control the batch check out/in featyre (enables checking out and in exported files during batch export) defaulting to on.

I removed the "export file list" button since there's no need for it any more (I don't think anybody ever even used it).

I added an "undo check out" button, which undoes the check-out of all the exported files.

When it's automatically checking out and in the batch exported files, and an export fails, it undoes the check-out instead of checking in bogus files. (whew!!!)

When you export a single Max file (as opposed to the batch "Export files in database" button), the exported files are not automatically checked in or out.

There are one-shot "check in" and "check out" and "undo check out" buttons for that situation, where you may want to export it several times and test it before checking it in.

The check in/out code only deals with the exported files, not the max source files. It's the artists's responsibility to check out and in max files they're going to modify,

since the max source files are much more preciscious than the machine generated content!

-Don

Trottier, Chris

From: Doornbos, Jamie
Sent: Thursday, January 28, 1999 4:44 PM
To: MAXIS CTG @ Maxis
Cc: Lawson, Mike
Subject: our first situation

I just added a new object to the game that implements our first situation. There is some new code to support it, but all the code is in last night's build, so you should be able to see it with fresh content and EXE from dailybld.

In this situation, you must try to keep a person awake for 12 hours. Here's basically how it works:

If the situation is not active, it tests every 4 hours (game time) if there is any person eligible for the situation. Currently a person is eligible if they are a family member of the current house, are awake, and have energy < -50. This is coded in the tree "tweak is person eligible". If an eligible person is found, it shows a dialog asking you if you want to start the situation. If you choose no, the situation waits 3 game days before attempting another trigger. If you choose yes, the situation becomes active and shows itself as a little icon in the lower right of the screen.

If the situation is active, it checks for win/lose conditions every 30 minutes. If the person is found to be dead or gone from the house, it informs you and asks if you want to cancel the situation. After 12 hours, if the person was not found to be sleeping, you win. If the person was found to be sleeping after 5 or less hours, you lose. If the person was awake for between 5 and 12 hours, you "almost win", a neutral condition. Currently the win/lose action is just a dialog, with no actual rewards or penalties. Any of these end conditions cause the situation to become inactive and the icon disappears. After an end condition, the situation waits 3 days before allowing another trigger.

Whenever the situation is active, you can click on the icon to bring up a progress dialog telling you how many more hours the person must stay awake.

TODOs:

Decide what to do if the person leaves the house or dies. Probably should just cancel it. This is an "in house" situation.

Make the timing more accurate. Currently everything is +/- 59 minutes, depending on when the situation starts. Better icon drawing system. This is placeholder art, but is also placeholder code, since it doesn't do the frame compose scheme to get around anti-aliasing problems like the action icons.

Demote the situation object from it's "global sim object" status. This causes it to be automatically placed in every house when the house is opened. It has this status for demo purposes.

Sound effects for icon animations.

VOX? This seems hard since the person's name must be used, and the only people the user sees are the ones they create.

Better accuracy in checking for end conditions. The person could fall asleep and wake up within a 30 minute period. Implement the reward and penalty.

Design questions

Do situations occur on conditions in more than one house? I.e. neighborhood situations.

Do we need situations that trigger at an exact moment (not waiting for the trigger delay)?

What happens when a person in a situation dies or goes to work?

How do we do VOX, as mentioned in the document?

Obvious big one: What is the list of situations?

Here are the tuning constants, and their locations:

<u>Constant</u>	<u>current value</u>	<u>location</u>
Hours to win	12	Constant table in situation object
Hours to lose	5	""
Trigger delay	4 hrs	tweak tree in situation semi-globals
Trigger probability	100%	""
Dead time delay	3 days	""
Active delay	30 min	tweak tree in situation object
Eligibility energy threshold	-50	""

Trottier, Chris

From: Doornbos, Jamie
Sent: Wednesday, February 10, 1999 5:27 PM
To: Ryan, Kana; Wright, Will; Trottier, Chris; Barrett, Patrick; Lawson, Mike; Mackraz, Jim
Cc: Curtin, Claire; Wolosenko, Roxy; MAXIS CTGPROG @ Maxis
Subject: RE: Today's discussion

Just implemented most of these items. The following should be available in tomorrow's build:

Menu interactions are available for user selection even when the object is in use. This may be turned off with the cheat "allow_inuse off". Note that this change only affects menu driven interactions. Functional interactions, like for counters and appliances, are still unavailable.

There is a new flag in the interaction structure (TreeTableEntry) to specify that an interaction may be selected more than once consecutively. Interactions without the flag set just play a "denied" sound if the interaction is selected twice in a row. There is no animation yet. I went ahead and set the flag for the "Drink Coffee" and "Drink Espresso" interactions. Also with this, I took out some old code that was concatenating the interactions of all objects on the tile if the one the user was pointing at had none.

Tool tip text when the user clicks on a darkened object (one without any actions available). When the user clicks, the text pops up by the cursor and the denied sound is played, just like the move tool. While I was doing this, I went ahead and moved all the placement tool tips, which were formerly in the code, into a text file : `$/TDS5/TDSScen/UIText.dir/#137#PlacementErrs.cst`

Added code to lower the priority of the current action when the user clicks the icon. This does not necessarily stop the action, because, first of all, it is up to the object to exit gracefully no matter what, and second, if no other actions are waiting, the action has no reason to end. The latter may be solved by putting in a hidden high-priority action that will force the current one to yield.

Tool tip text showing the name of the interaction when the user holds the mouse over one of the action icons in the queue. The first pass of this was really easy, but one problem is that the tool tip disappears unless the mouse is moved really quickly over the gap between icons.

-----Original Message-----

From: Ryan, Kana
Sent: Wednesday, February 10, 1999 1:16 PM
To: Wright, Will; Doornbos, Jamie; Trottier, Chris; Barrett, Patrick; Lawson, Mike; Mackraz, Jim
Cc: Curtin, Claire; Wolosenko, Roxy
Subject: Today's discussion

2/10/99 discussion

This discussion started as a result of the play testing issues that were written up by Roxy & Claire to summarize actions Will wanted to take. Let me know if you want to see any of these original documents.

Most of these items end up assigned to Jamie. Jim, I'll let you deal w/ prioritizing within complete list. See original note below as well.

Make menu interactions available to users of the object and other characters manually (but not autonomously) even when in use. This is #1 priority and Jamie is going to do something globally so that we can test it out. There are some concerns about cases that might not work... so we'll try it & see. If this doesn't work we'll reexamine use of "object in use" tool tip box. Note: Patrick already has this working for the computer such that player can direct character to play and then work and then... etc. and the character doesn't have to turn off computer, get up, sit back doen, turn on.

Even if item 1 doesn't quite work out, objects should not be in use while routing. Some work was already done on this but needs to be tested on object by object basis. Mike to test.

Sequential multiple interaction entries in the queue should essentially "drop out" or not happen. When interactions are selected one right after another, the first interaction should go to the queue. Subsequent interactions should not go into the queue but rather, the icon that is in the queue should flash and there should be a beep. Doesn't matter if it is current interaction in queue. This is a bit that will be set per interaction per object and there will be some exceptions. For the most part when players select use toilet a couple of times in the row it was in error or because they didn't realize the character would soon do it. However, there are cases where the player may actually intend for multiple interacitons i.e. when trying to keep awake by drinking coffee or espresso.

Add "no action available" tool tip box to items that never have interactions i.e. counters. Lower priority. Might require coordination w/ Don.

Cancel/stop 1st interaction in queue. High priority.

Add tool tips to the items in the queue such that interactions can use same icon but will have pop up tool tip w/ interaction name.

To improve feedback: If character can't use an object because they can't get to it (routing error), something is in the way or perhaps even if another character is using (if item 1 works out), character should route as close to the object as possible and do the point to and maybe move animation. I believe Patrick has this hooked up for some (all?) of the cases. This is ***much*** better than the character just not doing the interaction & giving the player no indication why. For the unique case of no chair in front of computer, character should point and a chair thought balloon should appear.

Remember: active interactions in queue continue until motive satisfied to certain point. This will need tuning.

-----Original Message-----

From: Ryan, Kana
Sent: Monday, February 08, 1999 9:57 PM
To: Wright, Will
Cc: Doornbos, Jamie; Trottier, Chris; Barrett, Patrick; Lawson, Mike; Mackraz, Jim
Subject: Can we get some time Tuesday?

Possible times: 10:30 for 30 minutes or 12:00 for as long as needed

To review decisions on & discuss:

Object in use: not when routing to but when actually using the object. Covered above
What should happen w/ sequential & non-sequential duplicate interactions? covered above

Jamie, maybe we can also touch base on status of a few other items that came out of play testing issues write up... specifically:

Reserved entry tiles for certain objects like tubs & beds try first to deal w/ through the feedback described above.
Can't complete interaction... Route as close to object as possible & either indicate to player that something is needed (i.e. case of the computer w/ no chair) or something needs to move covered above
Routing problems – small house & 2 people caught on opposite sides of doors Needs to be added to Jamie's list.

I believe the following (from play test write up) are waiting for assignment & priority from Jim

Route to & rotate objects – Jamie item. Chairs to be global chair solution, high priority.
Decoupled objects to be done object by object, lower priority
Stop (deletion) of current item in queue covered above
Motive failure cp flash Bobo
Bottom of the screen scrolling – pause & then auto scroll Bobo or Don?
Label display when in buy & build Bobo
Lighting – too dark in live mode (see notes below) & new approach for build mode (in play test document) Bobo
Need status of Don's items (see play test document)

Too dark in live mode: as discussed w/ Will & Claire week of 2/8/99

Try dark inside not quite as dark as outside. Maybe use blue like is done in the movies

Overhead light should come on when character enters room that doesn't have any lamps. Overhead light shouldn't be as bright as lamps. Overhead light should stay on for as long as someone is in the room.

Special case: if character goes to bed in the room, overhead light should go out. If the room is empty for 2 hours, the overhead light should go off.

Trottier, Chris**From:** Doornbos, Jamie**Sent:** Thursday, February 18, 1999 6:45 PM**To:** MAXIS CTG @ Maxis**Subject:** new cheats

These will be of particular interest to those editing lots. It may be too late for this time around, but I'm sure we'll need them later:

prepare_lot

First removes all the "come and see me" objects. Note that the come and see me objects are re-created for all non-architectural objects less than 1 game minute old whenever the game is switched to live mode. So, in practice, let the simulator must run at least 1 game minute before saving pre-fab houses. Then the cheat looks for instances of each of the required lot objects that must be manually placed. If an instance could not be found, an error report is shown. New objects will be added to the list as needed. Note that not all objects must be placed manually. Certain objects, such as situations, do not have a physical location and are required to be "one and only one" per lot. These objects are created automatically as needed by the game at house load-time. The cheat may also cover future lot requirements as they arise.

swap_houses [house #] [house #]

Swaps the 2 house files and updates the house number fields of the residing families. This works in the neighborhood screen, but the lot pictures do not update, so you'll have to go into a house and back out to see the swap. The cheat was needed because it is very difficult to update the family info using the existing cheats, especially if the houses already have furniture. Writing the code for it was trivial.

lot_border [tl] [tr] [bl] [br]

Sets up the non-editable tiles around the edges of the lot, leaving an editable rectangle in the interior. For each tile in the world, the cheat just sets or clears the non-editable bit, depending on whether it is inside the given borders. If a lot is to have a non-rectangular editable area, this cheat should be used in the beginning so it does not overwrite the special areas. The parameters stand for "top left", "top right", "bottom left", and "bottom right" and are independent of world rotation. This diagram demonstrates the interpretation of the values (world rotation 0):

Trottier, Chris

From: Bowman, Eric

Sent: Monday, February 22, 1999 12:00 PM

To: MAXIS CTG @ Maxis; Barthelet, Luc

Subject: Using the Sims Webcam

To turn on the webcam, position the mouse over the person, object, or location you want to "stalk." If you are stalking a person, it is easiest to pause the game first.

Press F4. You should hear a camera sound and see some zoom-in rectangles. Now a file called "SimsWebCam.bmp" will be created from scratch every 10 seconds.

To stalk something else, move the mouse over it and press F4. You will hear the camera sound and see more zoom-in rectangles.

To turn off the webcam, move the mouse over the person, object, or location being stalked, and press F4. You should hear a swoosh sound and seem some zoom-out rectangles.

If you are stalking a person, the camera will follow them around. If you are stalking an object, the camera will not move, even if the object moves.

Trottier, Chris

From: Hopkins, Don

Sent: Tuesday, March 23, 1999 9:13 PM

To: MAXIS CTG @ Maxis

Subject: bugs fixed

I fixed a bug with the gotorelative primitive, that was setting the "don't try hard to hit the final spot" flag when routing for interpersonal interactions.

Now it tries hard, and I've turned on the side-stepping adjust animations so it will have more ways to hit the final spot. So interpersonal interactions should line up much better now.

Patrick said "talk" was the only interpersonal interaction [besides "fight"] that would line them up diagonally, because the people did not touch so they didn't need to register.

But many of the interpersonal interactions seem to be lining them up diagonally.

The animations are only authored for non-diagonally adjacent tiles, not diagonals, so any diagonal interpersonal interactions that the people touch each other won't register correctly.

Are these diagonal interactions using gotoroutingslot to place the characters exactly 3 feet apart even in the diagonal case?

If not, we need to use gotoroutingslot on a slot that rotated around with the person, so they would be exactly 3 feet away from each other instead of $\sqrt{18}$ feet away from each other on diagonal tiles.

I don't know if gotoroutingslot supports diagonally rotated slots in front of and behind people, but it probably should, since that would make diagonal (and arbitrarily placed and rotated) interpersonal interactions possible.

I reworked the side stepping adjust animations (8 compass directions) so they begin exactly on the origin, and step exactly one foot in each direction, even diagonally.

And I fixed the code to blend the side steps to make them shorter if necessary, like the exact walking code does.

There was a bug in the exporter relating to time quantization, that caused the times of the samples to be slightly off near the end.

I found this when I was trying to make an animation end in exactly the right spot, but it was undershooting the sample it recorded just a bit, since the ticks and milliseconds time steps were being added up slightly wrong. Now the animations sample at just the right times, so it will be possible to make them end at exactly the right spot.

There's a bug I just discovered in the pop up head menu code, with hitting space to select the next person.

It selects the next person in the menu, but the menu items do not apply to them, but to the original person.

I'll fix this code, which seems to keep getting broken again and again.

Please be careful when messing around with the pop-up head menu code, because it's very complicated due to the modal dialog.

-Don

Trottier, Chris

From: Hopkins, Don

Sent: Friday, March 26, 1999 9:54 PM

To: MAXIS CTG @ Maxis

Subject: Selected person happiness highlighting & frantic walk to fires

I implemented support for smoothing groups in the exporter, which means that the artists now have complete control over where the creases are in the meshes.

Before there was no such control, everything was smoothed, but there was a bug that caused unwanted creases along the texture map seams.

Now there are no bad texture map seams, and only good smoothing group seams.

I have re-exported the arrow, but need to re-export all the other characters and accessories, and make sure they all have the correct smoothing groups, now that it pays attention to them.

If every face is in smoothing group 0, the model is faceted, so we should make sure all faces are in a smoothing group if they're to be smoothed.

Some accessories, like the dust pan, are made up of several separate objects. I presume that was done so you could get hard edges, because smoothing groups weren't supported before.

Now we can collapse them into single meshes and use smoothing groups to put the edges where they're supposed to be.

So now that smoothing groups work, I made a new selected person highlight arrow that's a lot simpler, and uses smoothing groups so it does not look so much like a smooshed banana.

It has nice sharp edges now, and I adjusted the light so it follows the camera rotation, and falls on the arrow at an angle that makes a sharp shadow along the edge.

So the reflection blinks very noticeably when it rotates, and you can easily see it from a distance (at far out zoom).

Lots of pixel delta, now!

As an added bonus, now the selected person arrow shows you their happiness by coloring red or green!

I made the arrow itself gray, and adjusted the color of the ambient and directional light on it, so it goes red when they're sad, and green when they're happy, and light yellow when they're neutral.

When they're really happy or sad, the arrow is very green or red, with nice smooth gradations inbetween, so you can really tell how everybody's feeling by pressing space and flipping from person to person.

I've implemented the frantic walk, and hooked it up so they frantically walk to Extinguish and Panic around fires.

I used the k_ODUunused6 object slot to control the walk style, so we should rename it "kWalkStyle" or something, with 0 for normal, 1 for frantic, and probably more to come.

The frantic walk does not match up at all with the standing turns, start walk, etc, though, so they look very weird starting and going around corners.

In fact the frantic walk is about a foot lower than the normal stand, so of course when it starts walking, the feet go way through the floor.

This is a classic case of a huge glitch caused by the center of gravity in the wrong place, but that's how the animation's defined.

We would need a set of frantic standing turns and a start frantic walk animation that matched up with the low center of gravity, if we want to keep the center of gravity where it is.

I made the standing turns play faster during the frantic walk, but it's still really silly looking.

The standing turns have long pauses at the end, that noticeably interrupt the frantic walk.

We need to fix the standing turns to be more fluid, so they don't stand around so long after turning.

-Don

Trottier, Chris

From: Mackraz, Jim
Sent: Monday, March 29, 1999 7:40 PM
To: MAXIS CTG @ Maxis
Cc: O'Hare, Kevin
Subject: Installer and SimsCamTransfer update

I couldn't test everything...

SimsCamTransfer:

- SimsCamTransfer no longer converts .bmp to .jpg (using GX); Bobo does it in the game now.

You must use a new version of SimsCamTransfer with new versions of the game.

[Not yet tested. I'm sure Luc will test it.]

- Still doesn't save your configuration settings; will add those to the registry soon...

To install SimsCamTransfer (uninstall the old version first, please):

1. download the contents of <ftp://zoloft/pub/install/nightly/SimsCamTransfer/> into a folder
2. Run setup.exe, stand clear

Installer:

- Gimex.dll (EAC image library) now installed with the game. [Easy to test: Game will fail if this didn't work.]
- I "manually" remove the *mystery turd files* in the 'disk1' installation directory. [Test: make sure the daily build installs and boots successfully.]
- I changed how the installer checks for the presence of DirectX to install.
 1. Won't abort installation if you run the packaged iTheSims.exe (*which has no DirectX in it*). Warns you that you should have DirectX installed, tells you how to check. Does all this at the end of the installation.
 2. I tested the packaged installer on a machine with DirectX 6.
 3. Mike, please test the normal installer (setup.exe in disk1) on a machine without DirectX 6 to make sure I didn't screw up the installation of DirectX. It's highly unlikely that I did; I wouldn't make this testing a high priority.

That's it. I dunno, it seemed like a lot of work at the time, but I think I got lucky.

[Thanks for the help, and the clean install script layout, Kevin.]

Trottier, Chris

From: Doornbos, Jamie
Sent: Wednesday, March 31, 1999 8:57 PM
To: MAXIS CTGPROG @ Maxis; Trottier, Chris; Lawson, Mike; Wright, Will
Subject: Career data

Just implemented an import routine to read in career data from a tab-separated text file.

The text file is just a "saved as text" version of Will's career spreadsheet.

The current version from the excel file Will gave me yesterday is checked in under \$/tds5/tdsscscen/careers.txt.

The problem with the OMK method is that too many home-grown tools are involved, and the file itself got really long and repetitive. The import routine was a pain to write, but this way we can tweak the values much faster.

Careers.iff is currently disabled, but I left it in since we may need it for bitmaps.

The importer is very strict on what it will accept. To play it safe, just don't edit anything except the cells that actually contain job specific information. If we add more job data or job levels or careers, the importer must be updated.

To change the career data,

- Check out careers.txt from sourcesafe.
- Edit the values in the Excel file (this needs to be in a central location, or in sourcesafe).
- Save the excel file as text and overwrite existing careers.txt
- To reload while the game is running, bring up edith and choose "Load careers" from the Sims menu.
- When finished, check in careers.txt.

Trottier, Chris

From: Doornbos, Jamie

Sent: Thursday, April 08, 1999 12:08 AM

To: MAXIS CTG @ Maxis

Subject: new stuff

In tomorrow's build

Door rewrite. Doors are dead simple. Answer door is gone. Greetings are gone. The algorithm goes like this:

Route to the door and walk through.

If the walk through fails, the door fails (they usually will try another door).

If the route fails, a "nearby" route is executed, and after a random idling sequence, the route is tried again.

After several tries, the door fails.

Special visitor entry code. Whenever a visitor comes over, they execute a special "begin visiting" tree. The algorithm goes something like this:

If all the people are outside, they route to the nearest one.

If one person is outside within 20 tiles, they route to the nearest outside person.

If all people are inside, they route to the nearest outside door, ring the bell, then meander around near the door.

This behavior loops 12 times and then they leave.

New way to greet. Instead of greeting automatically by answering the door, you must have a family member greet the person by selecting the greet interaction. Currently this just sets the person's status to greeted. Patrick will be working on a social interaction for this tomorrow.

Dynamic person bitmaps! Bobo did most of the work on this, using some of Don's popup head code, then I completed it by converting the UI code to do the generation. All user characters in sourcesafe have been updated with the new bitmaps.

Trottier, Chris**From:** Doornbos, Jamie**Sent:** Friday, April 09, 1999 4:19 PM**To:** MAXIS CTG @ Maxis**Subject:** dynamic multi-tile objects

I just finished implementing code that allows a multi-tile object to be specified as "dynamic". When an object is dynamic, there is special code that runs when the object is placed or picked up.

When a dynamic object is placed, it "becomes a part of" any adjacent objects of the same type. This means that the objects will act as a whole, like beds or computers.

Using some graphics and objects that I just, uhh, found... lying around, I prototyped a dynamic pool object. It is fun to play with, but the z buffer is really screwed up, and due to missing artwork, only draws correctly in one rotation. The prototype is in sourcesafe in pool.iff, along with a statically sized pool that Patrick made yesterday. The code to use it will be in Monday's build, or use the executable in //elmo/ctg/projects/tds/temp/sims.exe. There may be some problems with the undo, but load and save are working fine.

The hand tool notion of "pick up" can have one of two behaviors for dynamic objects. Either it picks up a single object, severing from its collection as though it had just been picked in the catalog, or it can pick up the entire object. We may want different behaviors for different types of objects. By default, it just picks up the whole thing.

Some things we may or may not want to use this for.

Floods. We can now easily program floods that morph as they get bigger and look more like real big puddles. This would require more artwork.

Cabinets. Perhaps. This would require that the code not care if some parts of a multi-tile object are rotated in a different direction, a long-time assumption in some places in the code, but maybe not very many. For this we would probably want the hand tool to only pick up the single object being pointed at. In general, we may want to stick to simple things that do not need to Wworry about direction.

Hedges. It is definitely possible, but because the hedges are so large, may be too art or RAM intensive. It would not be hard to limit the way the hedges work so that there would never be a block of 2 by 2, thus eliminating a lot of the graphic requirements.

Carpets. Definitely! That would be really cool if you could just drag out a rug, and have nice rounded corners. The graphics for this will be much easier if we implement a requirement for the carpet to always be a rectangle.

Table. Same as carpets. Would be really neat, but lots of graphics if we allow non-rectangular.

Bookcases. This would be cool too. We could get away with only 3 sprites if we implement a constraint that requires rectangles to have a width or height of 1. Would probably also want to constrain to a maximum of 4 in the other dimension.

Couches. Same as bookcases.

Other types of pools. Programatically, would be easy to have dynamic ponds with fish animations, and fishing interactions.

Flower beds. These would be cool.

Boarded in gardens. Probably constrain to rectangle.

Stairways as you go. Possible, but difficult, since we'd need some way to get the functionality that the static invisible objects now provide.

Some other details:

Dynamic objects must map their own graphics based on adjacency to other objects in the collection. Every time the collection is altered, adjacency flags are recomputed and passed to a call back tree.

Trottier, Chris

From: Hopkins, Don
Sent: Monday, April 19, 1999 10:37 PM
To: Trottier, Chris; Hedman, Eric; Chin, Eric; London, Charles
Cc: Mackraz, Jim; Hopkins, Don
Subject: RE: exporter--auto checkout/checkin

I've now put a much more robust SourceSafe interface into the exporter.

It makes a .bat file with all the SourceSafe commands to check in or out all the files produced by each max file, and it executes the whole bat file in a dos shell at once.

The bat file redirects the error messages from sourcesafe to another file, and collects them all together, which the exporter prints out in the MaxScript listener window to summarize the results.

Common error messages are like "you already have that checked out" or whatever.

If it's successful, the results show the command followed by the name of the file (since ss prints it to stderr on success).

If it's not, the results show the command followed by the ss error output.

I had to do a dirty trick to collect the stderr output of sourcesafe in a file, since the dos shell does not have stderr redirection.

I found a program on the net called "rdstderr.exe" for just that purpose of redirecting stderr to a file, so I installed it in s:\win32\rdstderr.exe.

Also, Jamie warned me that there were problems with the version 4 ss.exe in s:\win32\ss.exe, so I also installed a copy of my version 5 ss.exe in s:\win32\ss5.exe, that the exporter invokes.

This should prevent certain types of source safe corruption.

Should we just install the whole version 5 on the server, or are we holding back on that for some reason?

Please get another copy of the exporter plugin and maxscript startup script, from:
r:\pub\dist\MaxScript CMX Exporter

-Don

-----Original Message-----

From: Trottier, Chris
Sent: Thursday, April 15, 1999 12:29 PM
To: Hopkins, Don
Cc: Mackraz, Jim
Subject: exporter--auto checkout/checkin

Just a reminder that I'll be doing a lot of big chunks of exporting, so this would really help me.

Thanks.

Trottier, Chris

From: Bowman, Eric

Sent: Thursday, May 06, 1999 6:36 PM

To: MAXIS CTGPROG @ Maxis; MAXIS CTGPROD @ Maxis

Subject: primer on shadows

I'm going to spare a detailed description of how Edith works; hopefully those who need it can get a hands-on demo from someone who knows.

2 traits about an object's shadow can be changed:

shape

"brightness"

Shape can **only** be changed for **single-tile objects**!

Brightness can be changed for either, but the meaning of brightness is a tiny bit different.

Everything gets changed in the Object Definition pane.

Single-tile objects:

default 'shadow' value is 0, for round shadow. Set to 16 for square shadow

default 'shadow brightness' value is 0. For now only 0 or positive values are allowed. Positive values make the shadow "less dark."

Multi-tile objects

Don't change the 'shadow' value!

Play with the shadow brightness value for **all** the multi-tile sub-objects. For instance, I found "100" to be a nice value for the pine tree.

Horror-of-horrors, we need to go through each object and make some decisions about whether the shadow is fine, needs brightness tweaking, or should be square.

Trottier, Chris

From: Mackraz, Jim

Sent: Thursday, May 06, 1999 2:59 PM

To: MAXIS CTGBUGS @ Maxis

Cc: Perry, Michael; Barthelet, Luc; Perkins, Steve; Halamandaris, Trish; Buechner, Patrick

Subject: SimsCamTransfer bug

The VB app for transferring SimsCam pictures to a web site (SimsCamTransfer) has a bug.
If the initial path specified in the configuration dialog doesn't exist, the tool gets a runtime error and exits.

Reproduce:

uninstall the game and/or remove c:/program files/Maxis/The Sims

Launch SimsCamTransfer, click on Configure, see error dialog.

Workaround:

install the game to its default location (path as above)

or

manually create the folder above, and then use the Configure dialog to point SimsCamTransfer to the directory you really installed the game.

Michael, you own SimsCamTransfer now. Bon Appetit.

Marketers: I didn't know whether you used this tool for your own webcam sessions.

jm

Trottier, Chris

From: Bowman, Eric

Sent: Tuesday, May 25, 1999 5:53 PM

To: MAXIS CTGPROG @ Maxis; MAXIS CTGPROD @ Maxis

Cc: Ryan, Kana

Subject: Nightly Build now behaving nicely

I have made the nightly build somewhat configurable, so it can run on any machine with the right software installed (Visual C++, InstallShield 5.1, PackageForTheWeb 2.0).

There are directions here:

`$/Build/readme.doc`

Slow as it is, any of us can now run it locally by installing the right software and getting the right files from SourceSafe into the right places. In particular, there is one file you must create that reflects your local machine (e.g., where InstallShield is located, which drive you are building on, etc.). Hopefully looking at the readme.doc and SourceSafe layout will make it clear what's going on. Feel free to add to the readme if I've left stuff out (which I probably have).

Versed is getting increasingly flakey, so I have moved the nightly build over to my machine, running at 4am.

Hopefully it will work tonight!

From: Bowman, Eric
Sent: Tuesday, June 29, 1999 7:23 PM
To: MAXIS CTG @ Maxis
Subject: Camera Mode, Scrapbook

In tomorrow's build, Camera Mode!

There is no camera button yet, so to go into camera mode, enter this cheat:
cam_mode on

To get out of camera mode, click on Build, Buy, or Live. Or cheat, "cam_mode off".

You can adjust the snapshot size & quality, and when you click, a snapshot is taken, and the scrapbook opens. You can add descriptions to your snapshots there, as well as delete them.

You can also click on the eye button to open the scrapbook.

Everything is according to spec, I believe, except that the custom button in the camera panel does not yet draw the pixel dimensions, and I decided to use ctl-arrow keys to change the size, since shift-arrow keys rotate the world.

There is a bug I will fix tomorrow, where the logo doesn't get applied until the image is saved. "Small potatoes."

Each family does not yet have its own directory, so there is a new directory, Scrapbook, in UserData. We may live with this (and add some more code to distinguish between different family's snapshots), or we may add a directory-per-family.

And boy, talk about yer ugly programmer art! Luckily the art is all data driven, so Charles can replace it without me having to change any code (in theory...)

From: Barrett, Patrick
Sent: Tuesday, July 13, 1999 5:29 PM
To: MAXIS CTGPROD @ Maxis
Subject: Floor and Wall files

Currently they only contain one with an ID of '1' but eventually will have multiples number from 1 to however many are in there.

Floors are named internally with a two letter code in the format "XY" where X can be 'H', 'M', 'S'. This is used for the floor sound. 'H' is a hard floor, 'M' for a medium floor, and 'S' for a soft floor. Y can be 'D', 'M', and 'L'. This is used for the floor color type. 'D' is a dark floor, 'M' for a medium floor, and 'L' for a light colored floor. This is used for substitution for missing floor files from the default set.

Walls are named internally with a one letter code in the format "X" where X can be 'D', 'M', and 'L'. This is used for the wall color type. 'D' is a dark colored wall, 'M' for a medium wall, and 'L' for a light colored wall. This is used for substitution for missing wall files from the default set.

It is basically a normal .iff file with some extra data used by HomeMaster which the game can just ignore.

Patrick J. Barrett III
Software Engineer - "The Sims"
Maxis - Electronic Arts

pbarrett@maxis.com
<http://www.thesims.com>

