



2 THEATRE SQUARE  
SUITE 230 ORINDA, CA  
94563-3346  
MAIN 510 254 9700  
FAX 510 253 3736  
DIRECT 510 253 3705

April 20, 1992

David Greschler  
Boston Computer Museum  
300 Congress Street  
Boston MA 02210

Dear David:

How's the SimAnt exhibit going? I'm writing because Maxis plans to release a computer software game this summer, called SimLife, that you could use as an exhibit in your museum.

SimLife is a genetic simulation game that exposes players to concepts in biotechnology and computer science. Players create and control every aspect of an ecosystem, from the plants and animals to the climate and underlying physical laws. SimLife is based on artificial life technology, so the computer creatures are actually capable of evolving to become better adapted to their environment!

Because of its great educational potential, we'd like to know if you would like to preview a copy of SimLife for possible display in your museum. If this interests you, please call me at 510/253-3705.

Please look through the enclosed materials for more information on SimLife. We plan to release several more simulation games in the near future that could be incorporated into museum displays. I'll be in touch.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sally". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

Sally Vandershaf,  
PR Coordinator, Maxis



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## SimLife™ Background

### Overview

SimLife, scheduled for release in mid-1992, is the latest in a line of popular and award-winning simulations from Maxis.

SimLife is the first evolutionary simulator scaled to personal computers. In SimLife, players are given desktop access to the latest in emergent behavior and adaptive computing technologies for creating and simulating true biological systems and species that evolve – or become extinct – depending on decisions the player makes.

Every environmental and biological factor is open to change as players turn their world into an on-screen evolution laboratory. The eco-system a player creates might have little water, 100-hour days, an abundance of food, and wildly varying seasonal temperatures. The genetic makeup of the organisms within the system can be created from scratch so players can observe the evolution and mutation of their uniquely imagined creatures. Natural disasters, diseases, and predators can also be added as players watch their own new worlds develop.

### Key Features

- Wide variety of atmospheric, chemical and biological factors, instantly accessible through pop-up menus. Elements include seasonal temperatures and lengths, food supplies, toxins, water, vegetation and land masses.
- Extensive library of animals with which to populate the eco-system... and genetically alter.
- Close-up and long-range views and graphs to observe the dramas unfolding within the eco-system.

- Reference book on SimLife that includes a section on artificial life technology and its current and future applications.

**Target Audience**

Young adults, and older, who are interested in non-traditional computer games that reward players for imagination and exploration.

**Designers**

Designed by Ken Karakotsios, a well-known Apple developer.

**Availability**

Now in beta format, SimLife will be released in mid-1992 for Macintosh computers. IBM-compatible and Windows versions will follow.

**SimLife is a trademark of Sim-Business. Apple, Macintosh, and IBM are trademarks of their respective companies. Windows is a trademark of Microsoft Corporation.**



## Modifications to SimAnt for The Computer Museum V.2 (2/18/92)

These modification are based on our evaluation of SimAnt in our Exhibit Lab. We had the program running on a 21"monitor with a modified menubar and windows. Through Resedit we removed all the headers on the menubar, and modified FILE with NEW GAME, allowing people to only select NEW in this menu. We automatically had five windows show up: The Main Game, Behavior, Caste, History and Ant Info.

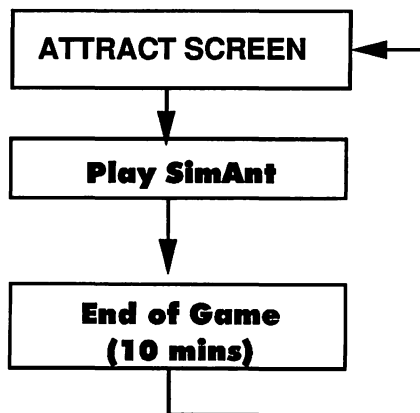
This was met with mixed sucess. In general we found the following problems:

- People didn't know to use the menu to get to a new game
- People were overwhelmed by the number of windows on the screen.
- People got confused by the tools on the left side of the main window.

What follows is a list of proposed modifications to SimAnt to make it a sucessful exhibit for the Museum.

### **Hierarchy:**

The hierarchy of visitors' experiences would be as follows:



### **Attract Screen:**

- A simple animation informing the visitor what the exhibit is about. This could be the SimAnt logo, or a screen with the ants crawling around.
- The attract screen stops when a mouse is clicked. The Attract screen should have instructions that state "Click the Mouse Button To Begin" such as the following:

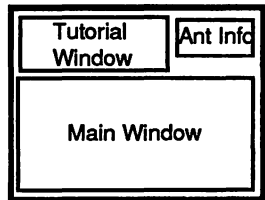
Click the mouse button  to begin

2

When the visitor clicks the mouse on the attract screen, they start a Quick Game of SimAnt with the following modifications:

#### *General Description*

- Visitors do not have a keyboard, only a mouse.
- The game is on a 21" screen.
- The screen is made up of three windows - the main window (ant colony), Ant Info window, and a "tutorial" window that is described below. The "tutorial" window is in the upper left part of the window: it is five inches wide (384 pixels) and eleven inches long (844 pixels). To its right is the Ant Info window. Below the "tutorial" and Ant Info window is the main window, covering the entire width of the 21" screen.



Example of screen layout.

#### *What can be done with Resedit*

- Eliminate the menubar
- Eliminate the growbox, closebox, and top holderbars on the main window (give it a static window definition), the Ant Info Window, and the new "tutorial" Window.

#### *Additional Changes Needed*

- Eliminate the tools on the left side of the main window.
- Default to AUTOTRACK on
- Default to NORMAL speed on
- EVENTS are turned off
- MESSAGES are turned off
- Walk Away Time Out: If the mouse is not moved in 90 seconds, close game and return to the ATTRACT Screen.
- Game Time Out: If the player has played for ten mins, end the game and announce, "Sorry, your game is over." Return to the ATTRACT Screen.
- Add an additional "tutorial" Window in the upper left side of the screen. The contents of this window is illustrated in the next page. While most of this window is only displaying static text and graphics, it has a "NEW GAME" button that starts a new game.

The Tutorial Window is illustrated on the next page.

The Tutorial Window:

**SimAnt is a program that lets you build your own ant colony. It is a simulation of how ants build their nests.  
In SimAnt, you are an ant. Here are some things to might try to do:**

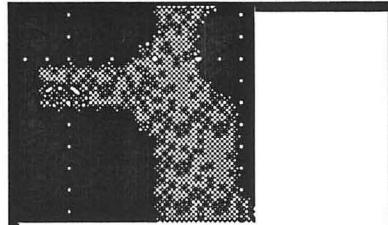
- **Try to support your colony with enough food so it can exist.**
- **Try to build up your colony by nurishing and digging.**
- **Try to kill the spider by recruiting other ants to attack.**



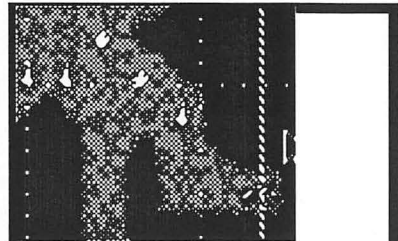
**To start a new game, click on the "New Game" button.**

### How to be an ant in SimAnt:

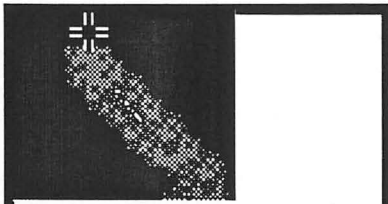
**The Yellow Ant is you. You can move around, dig tunnels, move to the surface, collect food, and recruit other ants. With these skills, you can grow your colony, kill the spider on the surface, and even attack red ants.**



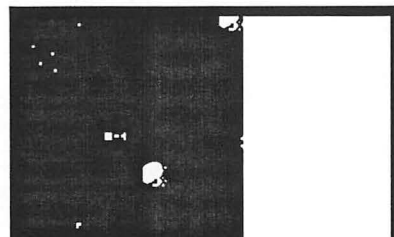
Moving the ant - click near the yellow ant and it will move to the place you clicked.



Digging tunnels - double click in the brown dirt and the ant will dig to the place you clicked.



Get out of the nest and onto the surface! Click on the grass at the top of the screen. The Yellow ant will move to the surface. Watch out - you can be eaten by the spider here!



Collecting Food: Double click on the green circles - that's what you can eat.

1	Recruit 5
2	Recruit 10
3	Release 1/2
4	Release All
X	Exchange
?	Help

Kill the spider! Recruit other ants by clicking down on the yellow ant - it will bring up the recruit window - choose the number of ants you want to recruit.

~~4/10~~

We need to test.

- Can HyperCard  
Start the game (as saved  
game)  
w/ Quick Keys (~~with~~ paused)
- Can HyperCard quit the  
game w/out saving  
after 10 mins w/ Quick  
Keys.
- Build Stack on 21" Screen.

## Menu:

A screen (not unlike the screen now where you choose between Full Game, Quick Game, etc..) where you get two buttons to choose from:

- 1) "How To Play SimAnt"
- 2) "Play SimAnt"

## "How To Play SimAnt "(tutorial):

Choosing this button gets you into a modified version of SimAnt's Tutorial.

It quickly reviews the following five *elements of the game*:

- 1•moving the yellow ant
- 2•digging tunnels
- 3•picking up food
- 4•moving between the underground and above ground
- 5•recruiting other ants

(note that the exhibit has no keyboard - any references to keyboard commands should be eliminated).

The tutorial then list some *possible goals* the users may pursue:

- Try to support your colony with enough food so it can exist.
- Try to build up your colony by nurishing and digging.
- Try to kill the spider by recruiting other ants to attack.

The tutorial then ends by taking people back to the Menu.

## Play SimAnt:

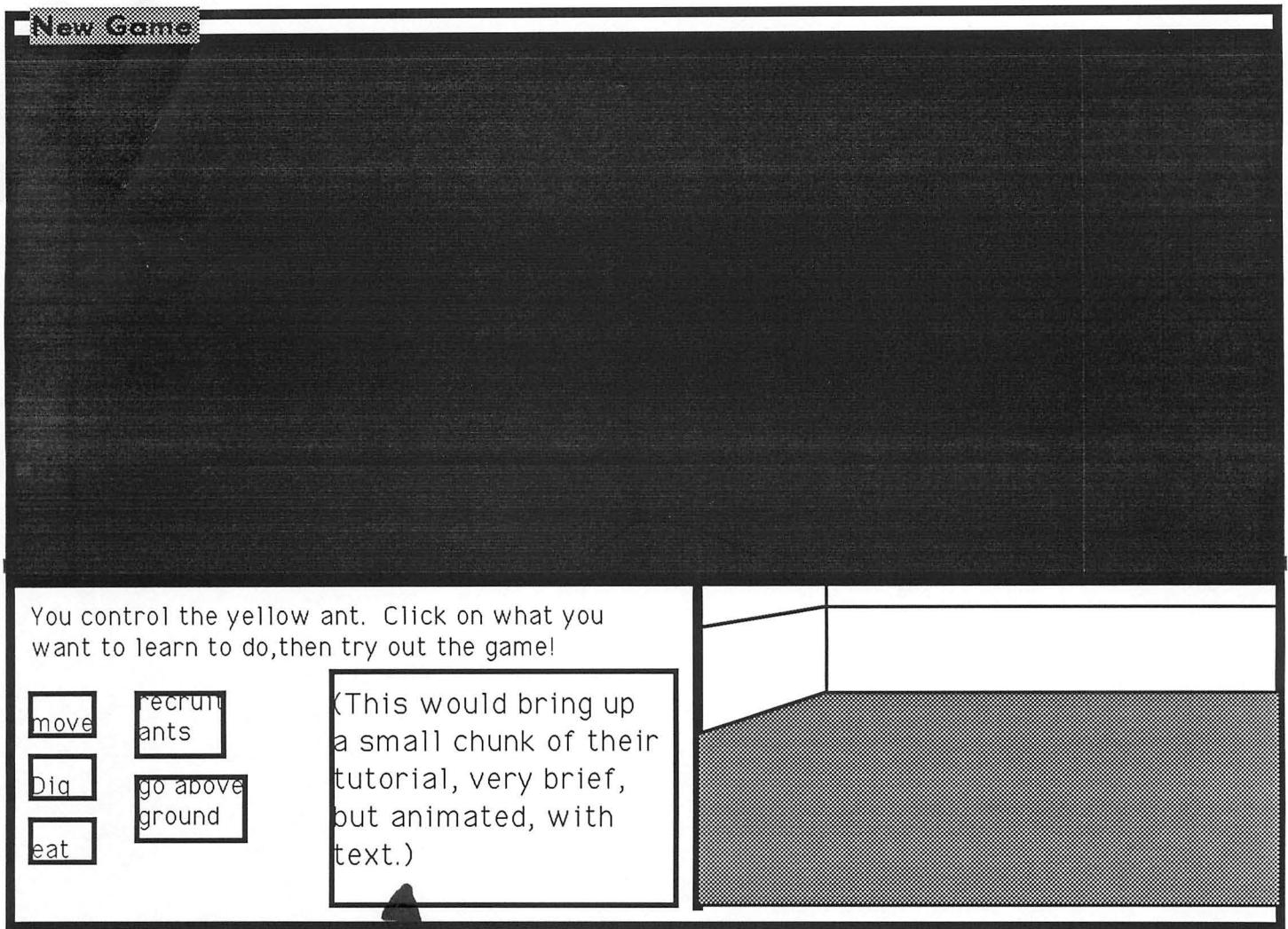
This is a SimAnt Quick Game with the following modifications:

- Eliminate menubar (*We did this with Resedit*) ✓
- \*•Eliminate the tools on the left side of the main window.
- Eliminate the growbox, closebox, and top holderbars on the main window (give it a static window definition). (*We did this with Resedit*) ✓
- Set the screen size of the main window to cover the entire width of the 21" screen. ✓
- Eliminate the closebox on the Ant Info window. (*We did this with Resedit*) ✓
- Default to AUTOTRACK / *default no messages or events (saved game)*
- Default to NORMAL speed ✓
- If the mouse is not moved in 90 seconds, close game and return to the ATTRACT Screen. ?
- If the player has player for ten mins, end the game and announce, "Sorry, your game is over." Return to the ATTRACT Screen. *Hy Card?*
- Add an additional Informational Window to the lower left side of the screen. The contents of this window is illustrated in the screen description on the next page. While most of this window is only displaying static text and graphics, it does have three buttons that do the following fuctions: ✓
  - START OVER: Takes you to the Attract Screen ✓
  - TELL ME HOW TO PLAY: Takes you to the tutorial ✓
  - NEW GAME: Starts the game over. ✓

## In Brief:

We've specified the modification to create a game that is simple to use in a 10 min experience. We've taken out the other windows which, while offering wonderful options, would tend to distract from the 10 min experience.





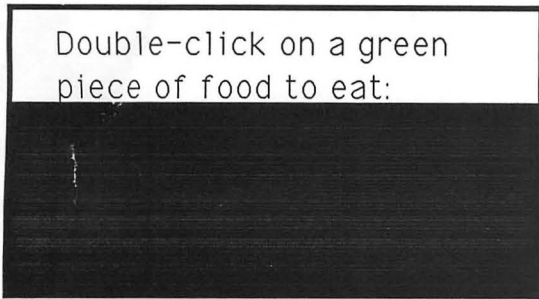
Dave, excuse the sloppy graphics. The "button" instructions are a way for the most impatient learner to instantly get a direction. The tutorial window could be the place with the game goals. ie:

- Suggested things to do in this simulation of an ant colony:*
- Help your colony grow by bringing it food.
  - Dig tunnels so there is room for the younger generation.
  - Try to kill the spider when your colony is big enough by recruiting other ants to attack.

This window would just be changed only when someone clicked on an instruction button, then it would go back.

About the instruction buttons:

They could be animated, with a bit of text:



I think you should include "picking up food" with "eating". It follows. Maybe each button is just 10 seconds of animated instructions. Visitors seemed to pick the idea up quickly once they saw what to do.

I just wrote "go above ground" because after they click on it, part of the animated instruction can demonstrate that by clicking on the ant hole, you can go back under.

I don't think they should make these tutorial windows interactive, because they're smaller, and people should just try it out in the game.

You may notice an area to the right which is an abstract interpretation of the yard. I just put it there for consideration. It could be a window serving no other purpose than to add to the environment, or just forget it and use it for space to put up some of the interesting charts, graphs, etc... What do you think about this?

# Modifications to SimAnt for The Computer Museum V.2

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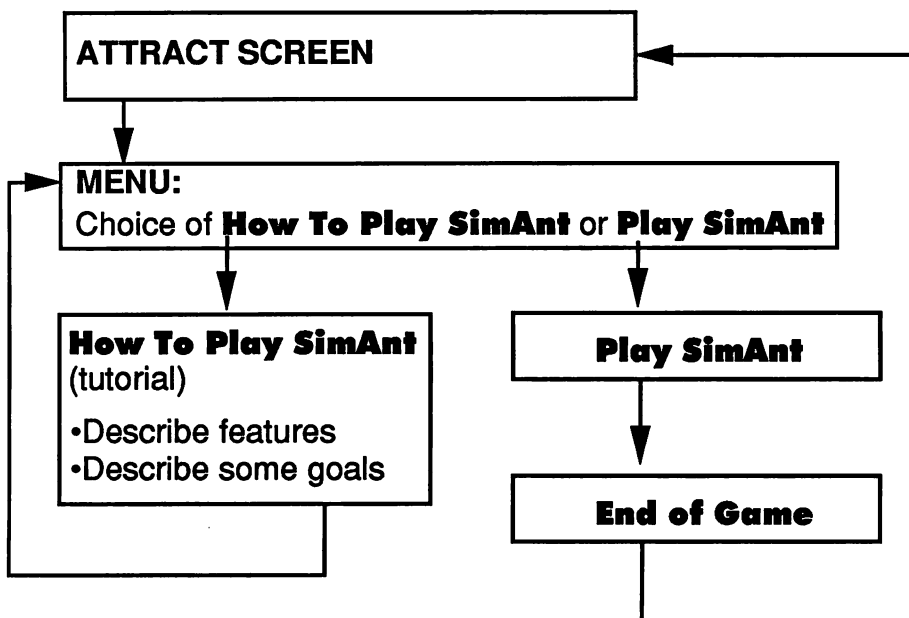
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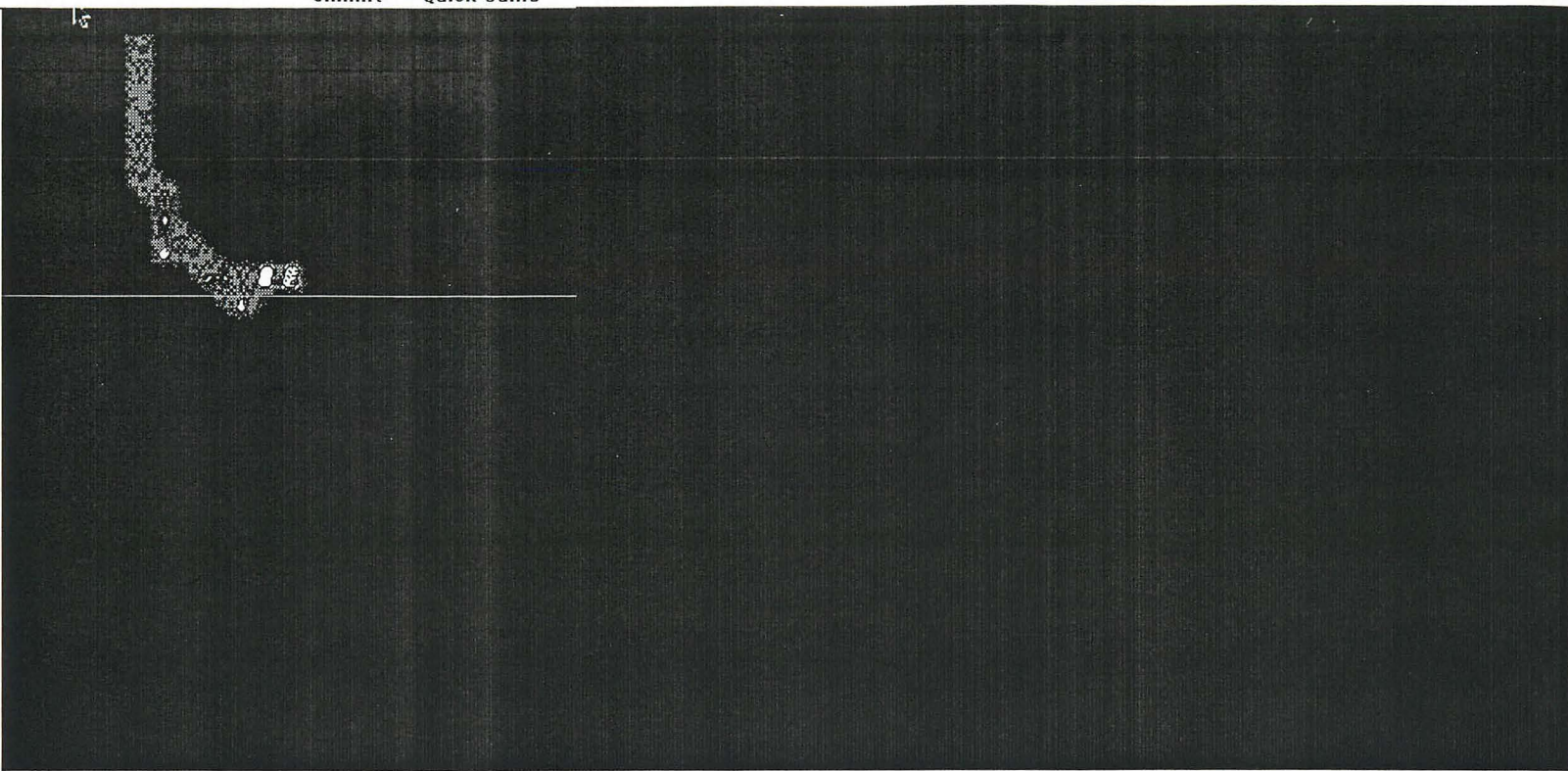
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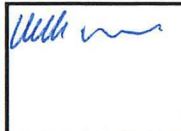




**Click the mouse button  to begin**

(This is the proposed layout for the 21" screen)

SimAnt™ - Quick Game



**How to be an ant in SimAnt:**

				
1•moving the yellow ant	2•digging tunnels	3•picking up food	4•moving between the underground and above ground	5•recruiting other ants

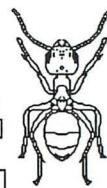
**Tell Me How To Play**

<b>Start Over</b>	<b>New Game</b>
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**Suggested things to do:**

- Try to support your colony with enough food so it can exist.
- Try to build up your colony by nurishing and digging.
- Try to kill the spider by recruiting other ants to attack.

**Top Card**

<b>Social Insects</b>		This is the SimAnt info system. It contains a small on-line database about ants. The buttons on the left side of this card will take you to different topic cards. You can always back up by using the PREVIOUS button below. This card is the TOP CARD and can also be usually reached by a button below. <b>Highlighted</b> words have definitions available by clicking on the word.
<b>Ant Anatomy</b>		
<b>Lifecycle</b>		
<b>Castes</b>		
<b>Social Behavior</b>		
<b>Common Species</b>		
<b>Ant Facts</b>		
<b>SimAnt Strategy</b>	<b>PREVIOUS</b>	

- this triggers a new game w/ Quick Keys button  
→ the stack ~~to~~ watches over and quits the game after 10 mins.

## I. General

This is a great program, but it needs to be less dense as a museum interactive. Although the sign for this interactive described SimAnt as a simulation, most visitors, even the ones who read and understood the meaning of the sign, viewed this interactive as a video game with slick graphics, neat sounds, and special effects.

This biggest user group of this interactive (besides the staff!) was *junior high to high school boys*, more so than girls, older women, men, and younger children. (Controlling the ant takes more coordination and attention than most younger boys or girls have.)

### Program Scores (Visitors' ages ranged from 6 to 30)

Program rating (sample-7):

3.8

4 (median)

Starting the program (sample-7):

85% of the visitors did not read the instructions.

Average number of times the program was used (sample-6):

2

Average time spent at interactive (sample-5): \*

12 minutes

15 minutes (median)

Visitors who use personal computers (sample-7):

100% (all had a PC at home)

\* School groups that came on weekday mornings would use SimAnt 10-15 minutes because of their limited amount of time in the museum. At other times, such as afternoons and weekends, visitors would spend 45 minutes to several hours at the interactive.

### Positive Aspects

- It encourages group use and group problem solving—people used the interactive longer and figured out more when they were in groups.
- Great graphics/sound—often it was the first interactive people walked up to.
- It allowed them to control (to an extent) the outcome of the program.

### Negative Aspects

- It appealed much more to boys than to girls.
- Often people would stay too long, and other visitors would miss the opportunity to use the interactive.
- All the information about ants at the periphery of the screen was lost on most visitors.
- It's hard to get a sense of goal or purpose of the interactive.

## **II. Technical Problems**

None that I noted.

## **III. Visitor Reaction**

Many visitors were confused by the references to the Window Map, Help, and other key functions, as the program was installed in somewhat of a clipped format and there was no keyboard.

Visitor comments:

"A very engaging game."

"Leave the SimAnt docs lying around."

"Very good. Try SimEarth sometime."

"I used this exhibit for 15 minutes and still don't have a clue how to use it. I think an exhibit should be a little easier. I use a computer for all kinds of applications and I was stumped on this one."

## **IV. Evaluator's Comments/Suggestions**

The first thing that visitors need is a clear, *on-screen* statement about the goal of the interactive. SimAnt makes a good case for the idea that women/girls tend to like computer activities that have a goal or finish, and that men/boys are more likely to poke around even if there isn't a stated goal. Having a goal statement would also help visitors realize that they are the yellow and that they're part of the black ant colony. Some visitors *never* figured this out!

### *Starting the Game/Choice of Games:*

To start the game, visitors should only have to pick from choices that are on the screen, rather than go under the "New Game" menu.

In order to cut down on the density of the program, we should give visitors two choices for using the interactive: Tutorial and Full Game.

We should limit the amount of time in the Tutorial mode and should introduce only the most basic information: the goal of the game, and skills such as food-gathering and digging tunnels. Having a tutorial is a good idea, but I watched many visitors get stuck in this mode, and get frustrated, because they could only do what the Tutorial was explaining at the time.

The experimental mode should not be an option to visitors. I personally love the Experimental mode, but using Experimental mode and playing a game are two very different activities. Having them as part of the same interactive dilutes the concept of a simulation and further confuses visitors.

*Instructions:*

This needs on-screen instructions. The more the instructions are centered on the screen, the more likely it is people will read them. Over and over, visitors write, "Give directions/instructions on how to use these computers." However, while watching them, I found that they very rarely refer to the surrounding text. One woman said she felt 'stupid' trying to figure out SimAnt, thinking that she should have been able to play the game without signage. Unfortunately, I think she represented a good percentage of our visitors.

Ant Cards: We tried giving instructions on individual "Ant Tips" index cards (see attached, page 4) that were lined up around the monitor. Those helped to a certain extent, but only for people who were already willing to read signs. They were overlooked by most because they did not fall into the natural line of vision a visitor has while using this interactive. If we used the same concept on the screen, it might help more.

Text Boxes: 95% of visitors clicked repeatedly outside of any of the text boxes (where you must click on the box to continue the program—perhaps this part of the text could be made larger.)

It would also be nice to keep Map Window up—knowing that you can get into the yard gives the game more meaning.

*Monitor Size:*

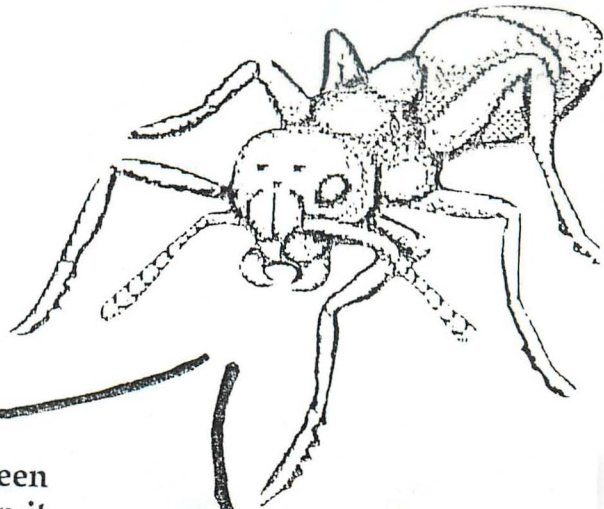
One of the factors that attracted visitors to SimAnt was the large monitor. Unfortunately, I think this may be the very reason people didn't read most of the on-screen text, the instructions sheet taped to the desk, or the "Ant Cards" on the monitor. Most visitors did not attempt to vary the amount of workers, or foragers, or look at the Ant Facts sheet at the bottom of the monitor, and only occasionally would they use the icon menu at the side. (These icons were also small and it was hard to tell what they did)

It was also difficult to get the sense that you were the yellow ant, and the yellow ant was hard to see, and thus hard to control. I had several suggestions that running SimAnt on a smaller monitor might solve some of these problems.

*Kathy O'Neill's Comments:*

Although she liked the program, she felt that it was too complex as it was, and she reacted strongly against the amount of "violent" images and text (when you're eaten by an ant lion, for example...).

### ANT TIP #4: Your Health



The yellow bar on the left of the screen shows the health of your ant. When it is low, eat by double-clicking on a piece of food or clicking *once on a black ant*. You must feed yourself and your colony to stay alive!

- FINAL NOTE: STRONGLY RECOMMEND USING "SILLY MODE."



- Eliminate Menu
- Eliminate Sidebar (except START OVER)
- Time out in Ten mins - "Your session is now over"
- 60 sec time out  
↳ Rating good

Auto Track

Normal Speed.

# Sim Ant.

~~eliminate experimental~~

A button for a new game

- ~~Tutorial~~ Tutorial:
  - Moving Ant
  - Digging Tunnels
  - Picking up food
  - Moving between under + above grd.
  - Recruiting other ants

**START OVER** — lower left

ATTRACT SCREEN



TUTORIAL OR GAME

~~Elements~~  
~~Goals~~

~~Goals~~

~~Vladimir~~

## EL Fish.

Alexi Pazanov - creator of Tetris.

Have a prototype

DOS version - (next 8-10 months)

OS/2 version now

OS/2 OS. (He will install it)

- Trident Super VGA card <sup>512K memory</sup> (not 1 meg or 256)

386 6-8 megs of RAM.

- NEC 3-D Multisync Monitor.

80 meg Harddrive

[He could install on to the harddrive]

Would like to know:

- They are striving for Artificial Life in the Aquarium.

→ What do we want in the aquarium?

→ Want to eventually create a Genetics lab -

Vladimir POKHILKO

535 Arastradero Road

Apt # 207

Palo Alto, CA (FAX possible)

94306 (415) 494-8051

~~Talk to Dan and see what we have.~~

~~Get rest~~

• Tell all the others: Nat: ed activities?

Exhibition?

• Call Vladimir.