

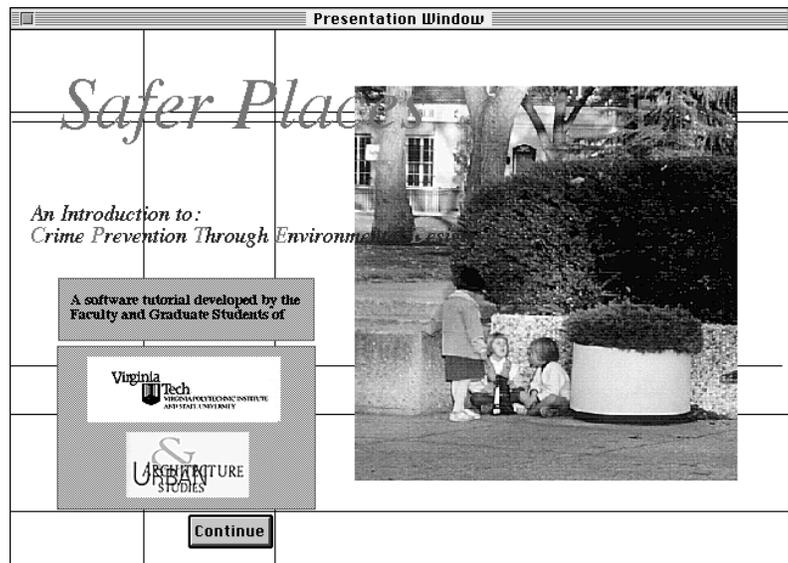
"Safer Places"

an overview to the interactive CPTED tutorial 3.13.97

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Crime Prevention Through Environmental Design (CPTED) is an area of study which examines the relationship between the built environment, its designed use and maintenance, and the perceived quality of life of its occupants.

These relationships have been studied by a number of professionals, including architects, criminologists, sociologists, planners and landscape architects. The body of knowledge of causes and solutions for crime and the environment is growing and while there are no absolute proofs which work in every neighborhood, every time, no silver bullets, there is a substantial body of anecdotal evidence to substantiate the effectiveness of CPTED principles.



CPTED - related studies have been undertaken by many notable scholars with Oscar Newman's work "Defensible Space" being perhaps most notable within the community of architects. Many of the researchers and trainers active in this field today are students and colleagues of Dr. C. Ray Jeffries, a criminologist in Florida. Although their are specific differences between the researchers conclusions, most seem to agree that some combination of surveillance, territoriality, and access control is critical to keep the built environment from favoring the activities of our societies predators.

Figure 1: introduction screen to "Safer Places"

It should be noted that CPTED - Crime PREVENTION Through Environmental Design is not a completely accurate title. ALL crime cannot be prevented by a physical environment most of our citizens desire to live in. CPTED makes an environment less attractive as a predators hunting ground. It cannot stop the determined predator.

It can, however make a significant change in the rates of some crimes of opportunity and perhaps more important, in the perceived safety and quality of life of the citizens.

Surveillance, both "organized" and "natural" in the words of Dr. Diane Zahm a CPTED trainer at NCPI is critical to keeping the predator from feeling comfortable. An environment which communicates the sense that someone has the predator under observation will be less favored by predators.

Territoriality supports the sense of being observed by communicating to the predator that not only is someone watching, but that someone cares, and is willing to question a stranger or call 911. Territoriality is communicated by symbolic markers (fences, shrubs, signs) and also with current maintenance (no broken lights, no broken windows, no graffiti - all signs of an environment no one cares for - an environment out of control.)

Access control supports both of the above principles in making it more difficult for a predator to be in a place where they do not belong. Sometimes this is an actual physical barrier, a fenced yard, a gate, a deadbolt, sometimes access control is just a deterrent to a short cut, taking away a predators quasi-legitimate excuse for being in the wrong place at the wrong time.

The National Crime Prevention Institute (NCPI) at the University of Louisville is a national training center for crime prevention officers. It offers a course in Crime Prevention Through Environmental Design (CPTED) which consists of forty hours of classroom and field training leading to certification.

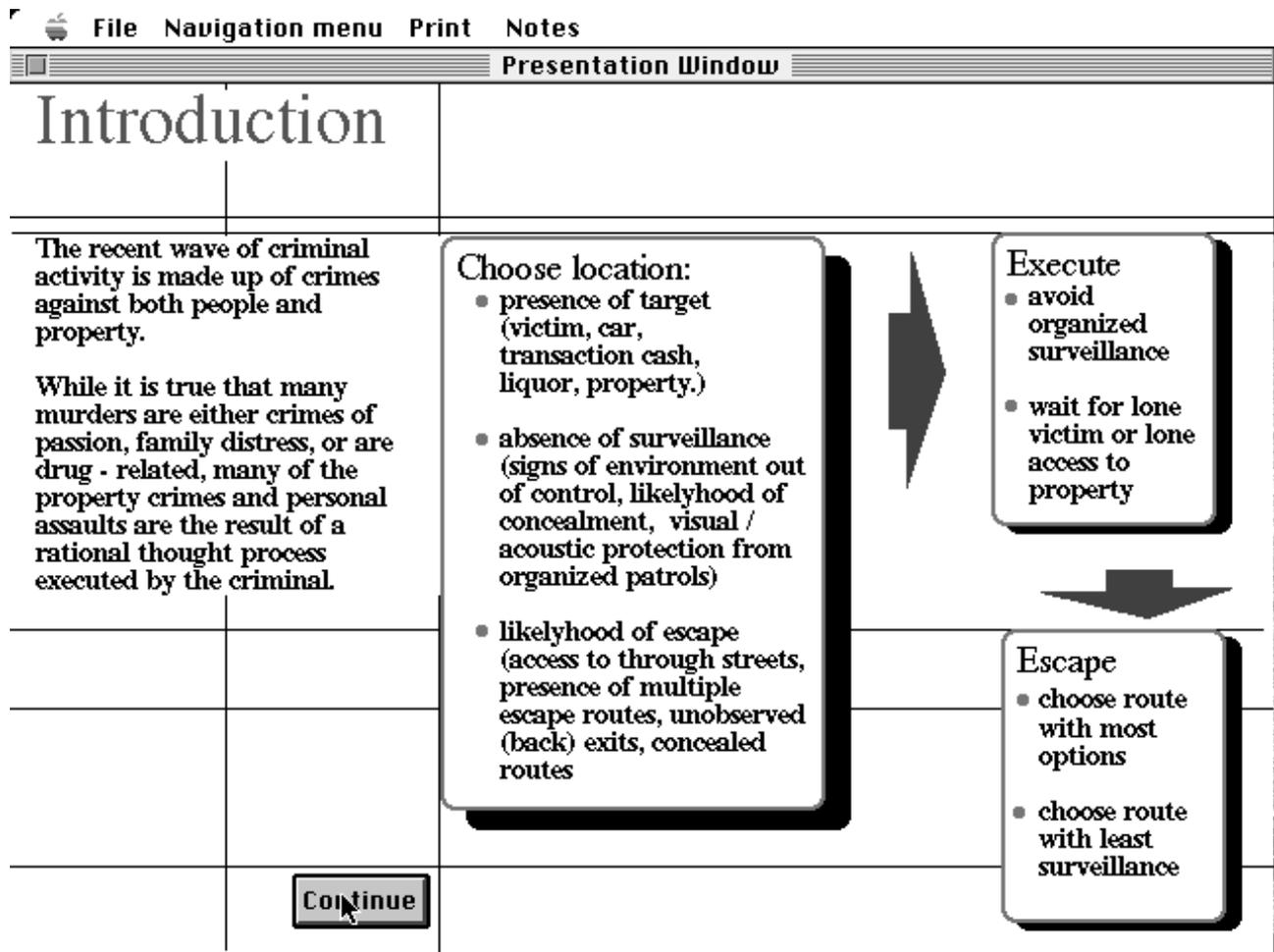


Figure 2: Crime process diagram

Most schools of architecture do not have certified CPTED trainers on their faculty. The National Architectural Accrediting Board (NAAB) which accredits professional programs in architecture does not include any CPTED concerns among its numerous life safety related performance criteria.

It is not surprising then to learn that most architecture graduates have very little knowledge of the advantages their designs offer to our societies predators.

It is also true that most universities are facing decreasing support from the tax paying public. This means that even if Crime Prevention became a desired subject in the topic of life safety - protecting the health and welfare of the public in the built environment - few schools would have the expertise or resources on hand to implement such concerns.

This project, sponsored by the Virginia Department of Criminal Justice Services through a federal crime control grant is an effort to address these situations in schools of architecture, landscape architecture and planning in the Commonwealth of Virginia.

The idea is to employ recent developments in interactive multi-media learning tools to develop an introductory tutorial to CPTED.

"Safer Places" is the name given to this effort undertaken by Graduate students and Faculty in the College of Architecture and Urban Studies at Virginia Tech in Blacksburg, Virginia.

"Safer Places" employs video clips, slides, overlays, and simulations to engage a student in this introductory study.

An introduction where background information, and the principles related to surveillance, territoriality, and access control is presented, followed by an overview into assessment methods, and other CPTED participants in local government This

leads up to a branching screen (shown at right) where the student chooses a path of inquiry either architecture, landscape architecture, or planning.

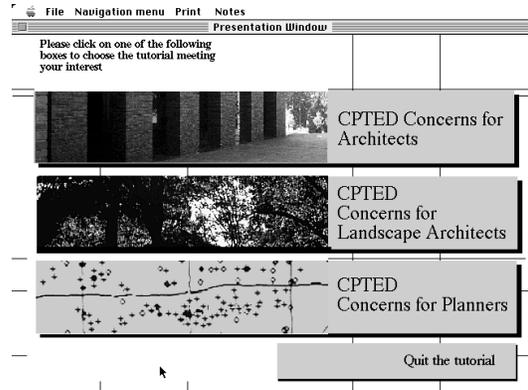


Figure 3: Branching screen

Choosing the CPTED concerns for architects brings the student to the introduction screen at the left. The "continue" button allows the student to proceed to the next screen.

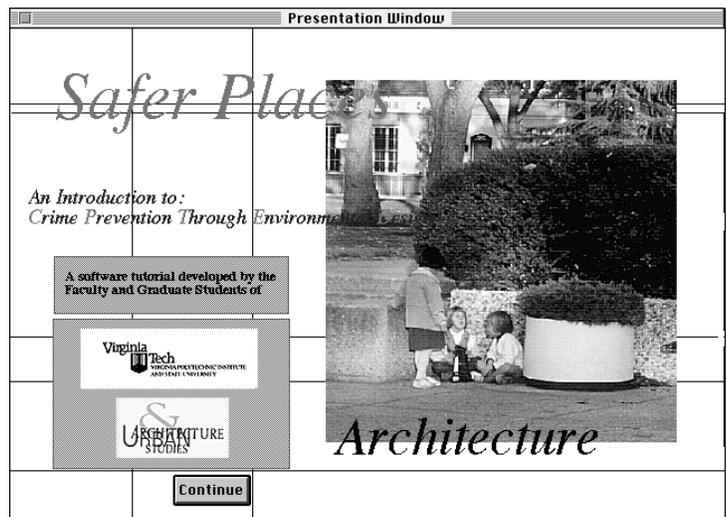


Figure 4: Introduction screen to CPTED concerns for architects

The next screen gives the students the choice of

- General Principles
- Retail issues
- Dormitory issues
- Infrastructure issues
- Transit system issues

Clicking on any of the buttons of this navigation screen (shown at left) links the student directly to the subject content. Future planned additions include education facility issues, health care facility issues, and corporate campus issues.

After clicking on a button, the student begins viewing a series of screens which introduce the victimization patterns related to the building type, examine concerns at the scale of the site, the building plan, and the exterior fenestration.

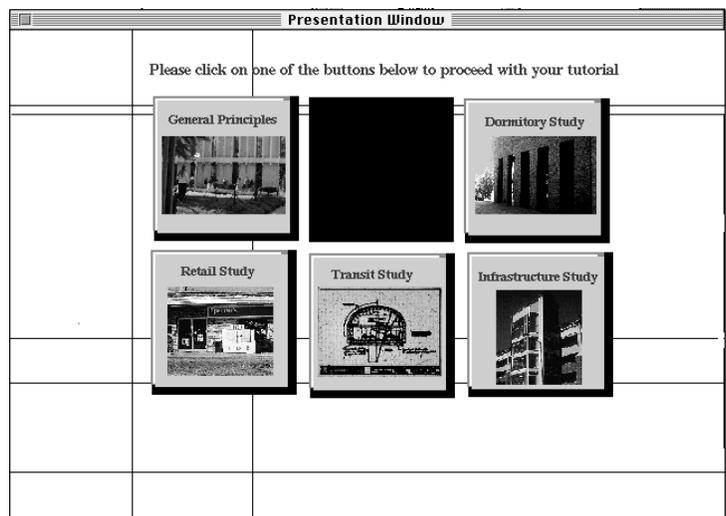


Figure 5: CPTED concerns for architects navigation screen

This sequence of screens demonstrates one strategy for presenting issues to the students.

Each screen has a major content orientation, in this case Surveillance. The text is kept to a minimum and the image is used as example for the point made in the text.

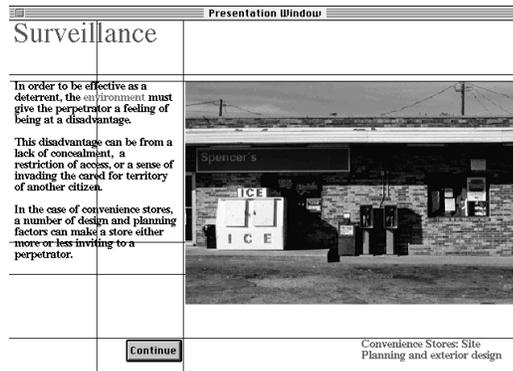


Figure 6: Retail study fenestration concerns

Here the text makes a specific point about concealment opportunities offered by the combination of ice machine location and window.

A red screen is superimposed over the glazed area in order to clarify what aspect of the situation is being pointed out in the text.

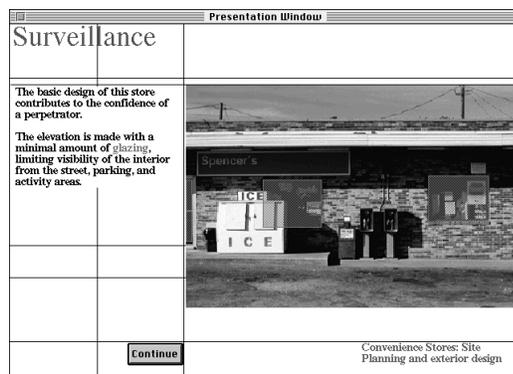


Figure 7: Retail study fenestration concerns, glazing highlights

Additional points are made in the screens which are displayed after the student clicks on the "continue" button.

In order to allow time for the student to read the limited text, the red screen and arrow emphasis is often overlaid after a set period of time (2 to 3 seconds) passes. This visually activates the screens and brings the students back to the emphasized text.

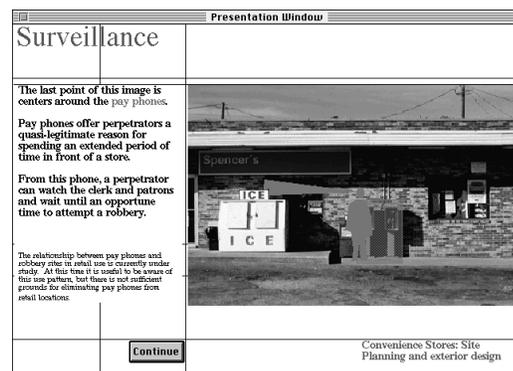


Figure 8: Retail study fenestration concerns pay phone patron highlight

A similar strategy is employed to address interior arrangement concerns.

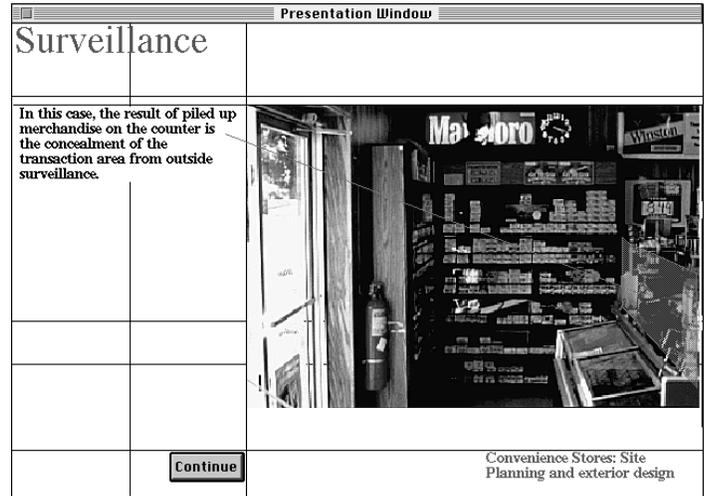


Figure 9: Retail study interior arrangement concerns

Red screened areas are superimposed over the cigarette rack and check out counter to connect this part of the image with the concern described in the text.

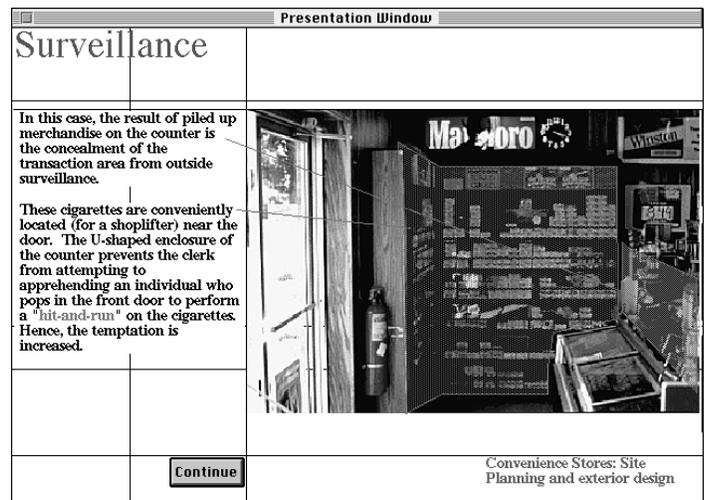


Figure 10: Retail study interior arrangement concerns, target highlights

After seeing and reading about an architect's opportunity to make an environment which favors predators less, the student is offered the opportunity to exercise their own judgement.

Here, a retail situation is proposed, given this shell building's relationship to main street, the student is asked to click on the site area where they would locate gas pumps.

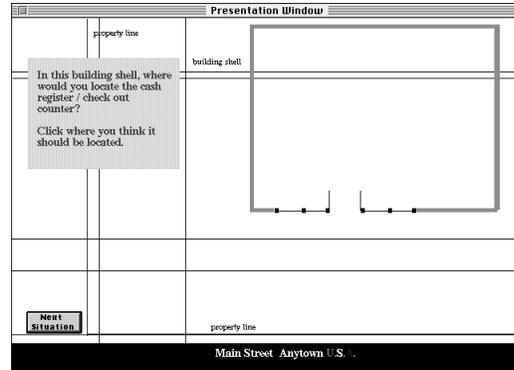


Figure 11: Retail study site design simulation base

This next screen points out the difficulties of this choice with a text field.

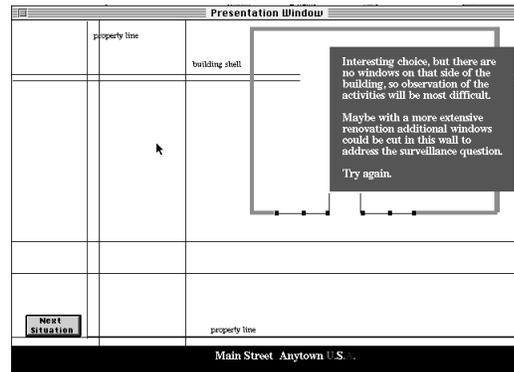


Figure 12: Retail study site design simulation base, selecting weak alternative

After two seconds, the message of the text field is supported by a graphic of the gas pumps, required windows, to show the student the impact of their choice.

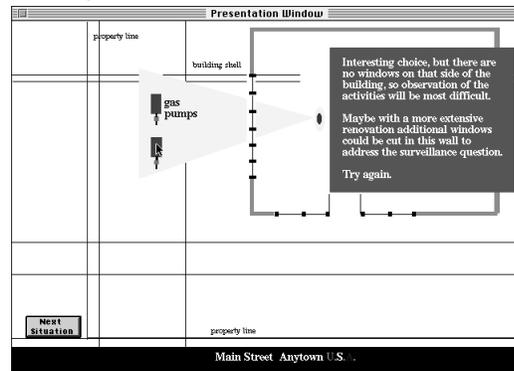


Figure 12: Retail study site design simulation base, selecting weak alternative, interior visual surveillance emphasis

Following this, the student is returned to the first shell building screen and asked to try again until a more favorable location is determined.

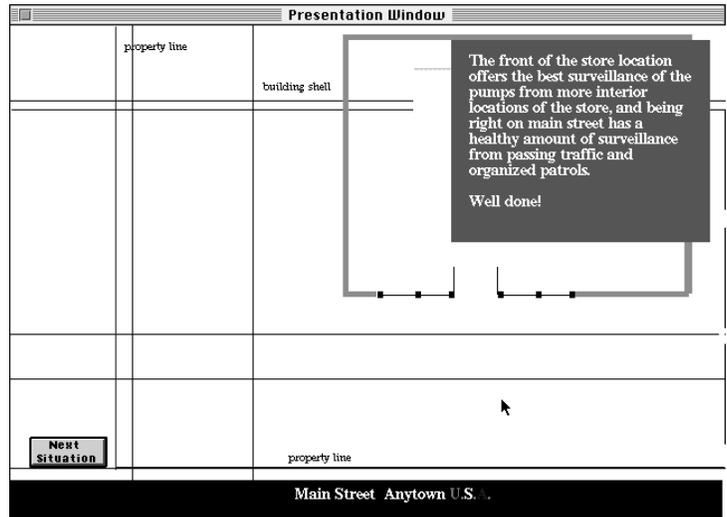


Figure 13: Retail study site design simulation base, selecting stronger alternative, text message

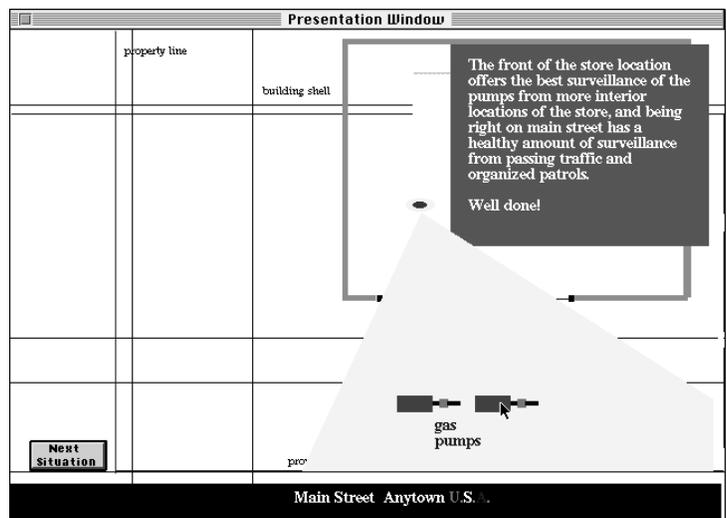


Figure 13: Retail study site design simulation base, selecting stronger alternative, text message, visual surveillance emphasis.

This next situation asks the students to locate in the plan, one element of the program, the cash register.

The student is asked to click where they would locate the gas station.

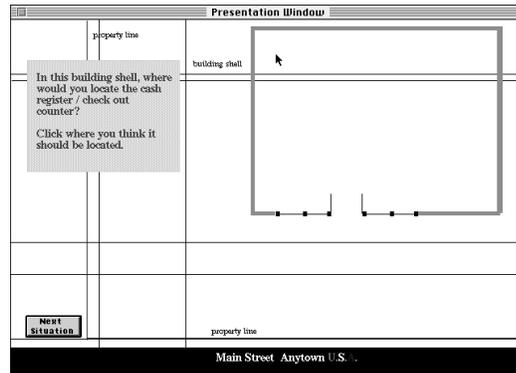


Figure 14: Retail study space design simulation base, selecting weaker alternative.

After clicking, the plan view of the cash register appears, along with a text field presenting the positive and negative aspects of this choice.

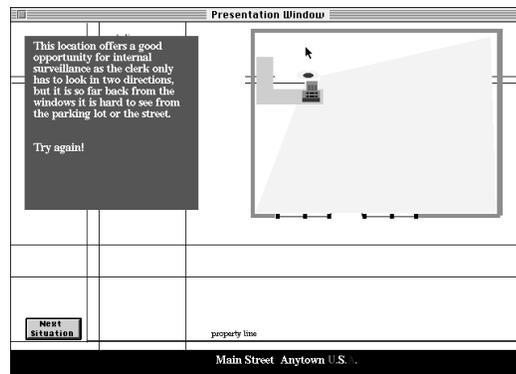


Figure 15: Retail study space design simulation base, selecting weaker alternative text block response.

After two seconds, a further consequence of the decision fades in, in this case it is the police car driving by on main street. The diagram emphasizes the point made in the text which says that locating the register in the back of the building limits its visibility from both organized police surveillance and the natural surveillance of citizens driving and walking by.

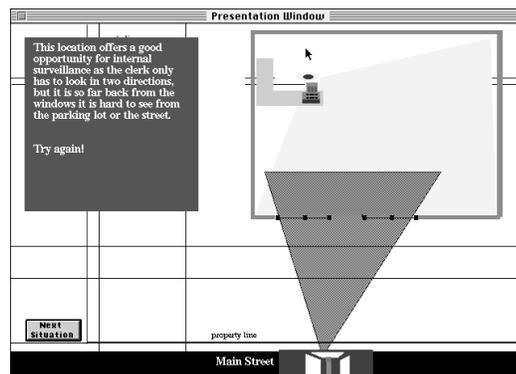


Figure 16: Retail study space design simulation base, selecting weaker alternative text block response, police surveillance emphasis.