
EBU6305

Interactive Media Design and Production

Usability Evaluation - II

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Set of usability heuristics

- ▶ 1: visibility of system status
- ▶ 2: match between system and real world
- ▶ 3: user control and freedom
- ▶ 4: consistency & standards
- ▶ 5: error prevention
- ▶ 6: recognition rather than recall
- ▶ 7: flexibility and efficiency of use
- ▶ 8: aesthetic and minimalist design
- ▶ 9: help users recognize and recover from errors
- ▶ 10: help and documentation

List of heuristics with descriptions and examples.*

HEURISTIC	NIELSEN'S DESCRIPTION	EXAMPLE
Visibility of System Status	The system should always keep the user informed about what is going on, through appropriate feedback within reasonable time.	A progress bar displayed in a Web browser that indicates the status of a file download.
Match Between System and the Real World	The system should speak the user's language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.	An "envelope" icon to represent e-mail.
Consistency and Standards	The user should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.	The "X" button in the upper right-hand corner of a window (Microsoft Windows-based systems, Redmond, Wash.).
Esthetic and Minimalist Design	Do not include information that is irrelevant and/or rarely needed.	Elimination of purely decorative, non-task-related visual elements in the interface.
Recognition Rather Than Recall	Minimize user memory overload by making objects, actions and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for using the system should be visible or easily retrievable whenever appropriate.	The input mask "dd/mm/yyyy" in a date entry field, instead of a blank field.

6. Recognition rather than recall

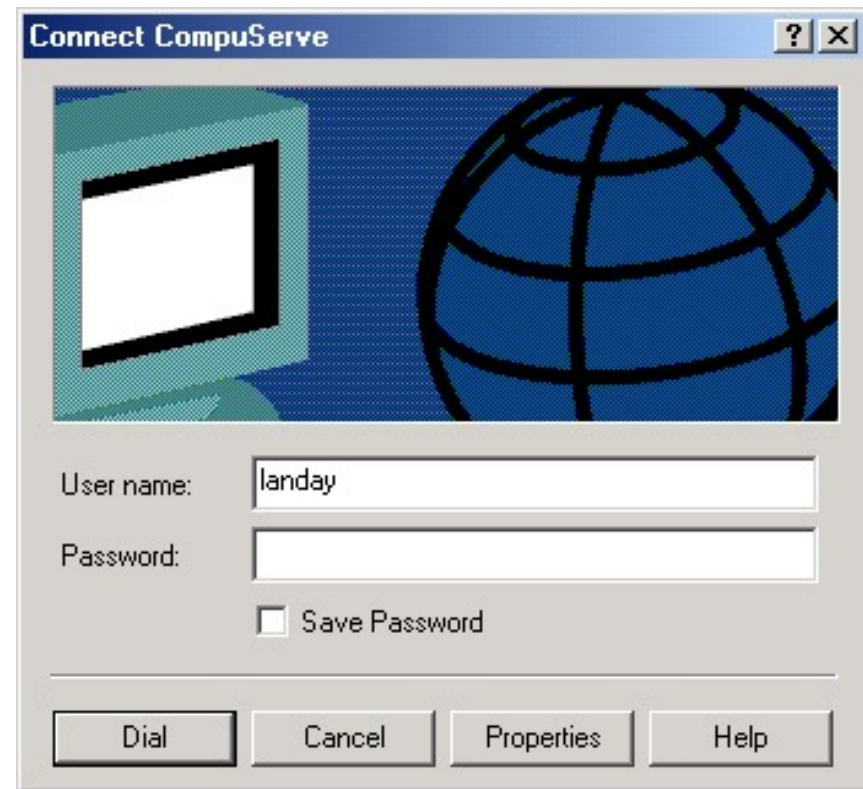
- make objects, actions, options, and directions visible or easily retrievable

Recall :

“What did you have for breakfast this morning?”

Recognition :

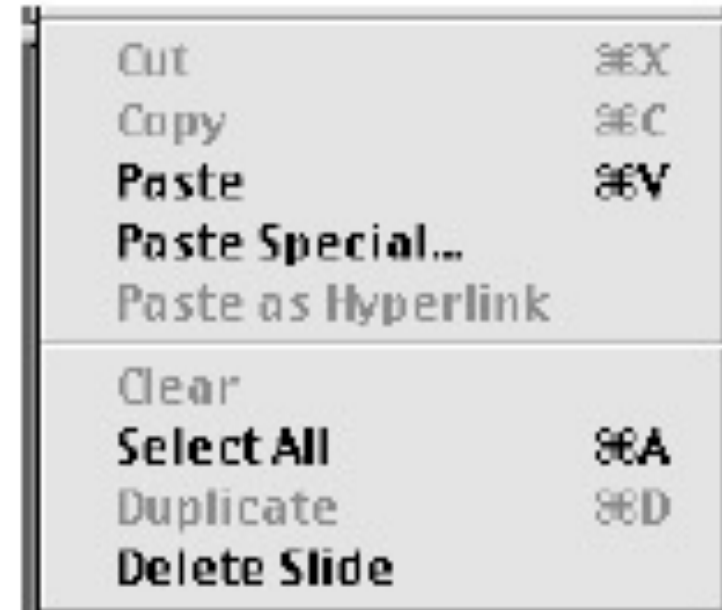
“Did you have toast or cereal for breakfast this morning?”



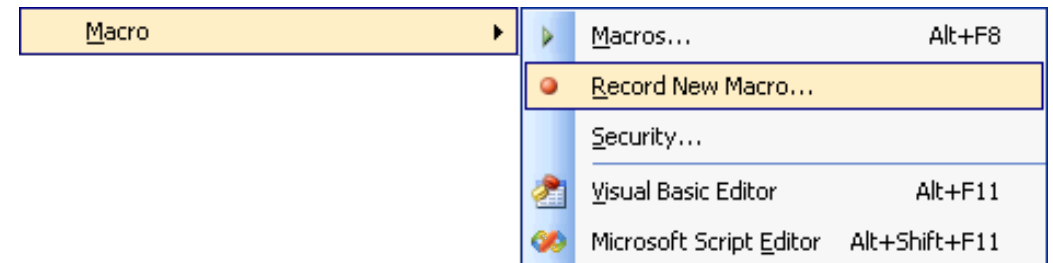
User Control and Freedom	After choosing a system function by mistake, the user needs a clearly marked “emergency exit” to leave the unwanted state without having to go through an extended dialogue. Support “undo” and “redo.”	The “undo” command to reverse the last action or sequence of actions.
Error Prevention	Even better than good error messages is a careful design that prevents problems from occurring in the first place.	Mechanisms that prevent obvious errors, such as entering a date in the past when making a patient appointment.
Help Users Recognize, Diagnose and Recover From Errors	Error messages should be expressed in plain language (no codes), precisely indicate the problem and constructively suggest a solution.	Avoiding error messages that provide information only useful to system developers or programmers (such as “HTTP 404 error” in a Web browser).
Help and Documentation	Help and documentation should be available, concise, concrete, specific, easy to search and focused on the user’s task.	Context-sensitive help accessible through a function key.
Flexibility and Efficiency of Use	Provide shortcuts for the expert user. Accelerators—unseen by the novice user—often may speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.	Providing the key combination “CTRL-C” as a way to copy the current selection.
* Adapted from Nielsen ¹⁸ with permission of the Nielsen Norman Group from Dr. Jakob Nielsen.		

7. Flexibility for efficient use

- accelerators for experts
 - *e.g. keyboard shortcuts*



- allow users to tailor frequent actions
 - *e.g. macro commands*



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8. Aesthetic and minimalist design

- e.g. no irrelevant information in dialogues

Form Title -- (appears above URL in most browsers and is used by WWW search)		Background Color:
Q&D Software Development Order Desk		FFFBF0
Form Heading -- (appears at top of Web page in bold type)		Text Color:
Q&D Software Development Order Desk <input checked="" type="checkbox"/> Center		000080
E-Mail responses to (will not appear on)	Alternate (for mailto forms only)	Background Graphic
dversch@q-d.com		
Text to appear in Submit button	Text to appear in Reset button	<input type="radio"/> Mailto
Send Order	Clear Form	<input checked="" type="radio"/> CGI
Scrolling Status Bar Message (max length = 200 characters)		
****WebMania 1.5b with Image Map Wizard is here!!****		
<< Prev Tab		Next Tab >>

8. Aesthetic and minimalist design



Google Search

I'm Feeling Lucky



百度一下

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9. Help users recover from errors

Good Error Messages Should:

- Clearly indicate that something has gone wrong
- Be in a human-readable language
- Be polite and not blame the users
- Describe the problem
- Give constructive advice on how to fix the problem
- Be visible and highly noticeable, both in terms of the message and how it indicates where things went wrong
- Preserve as much of the user's work as possible so that they don't have to do everything over again
- If possible, guess the correct action and let users pick it from a list of fixes
- Educate users by providing links to pages with an explanation of the problem

9. Help users recover from errors



We looked everywhere.

And couldn't find that page. But we did find these under the couch cushions.



Not what you're looking for? Try the links below:



Personal Finance Solution
[Mint.com](https://mint.com)



Personal Finance Mobile Apps
[Overview](#) | [iPhone](#) | [iPad](#) | [Android](#)

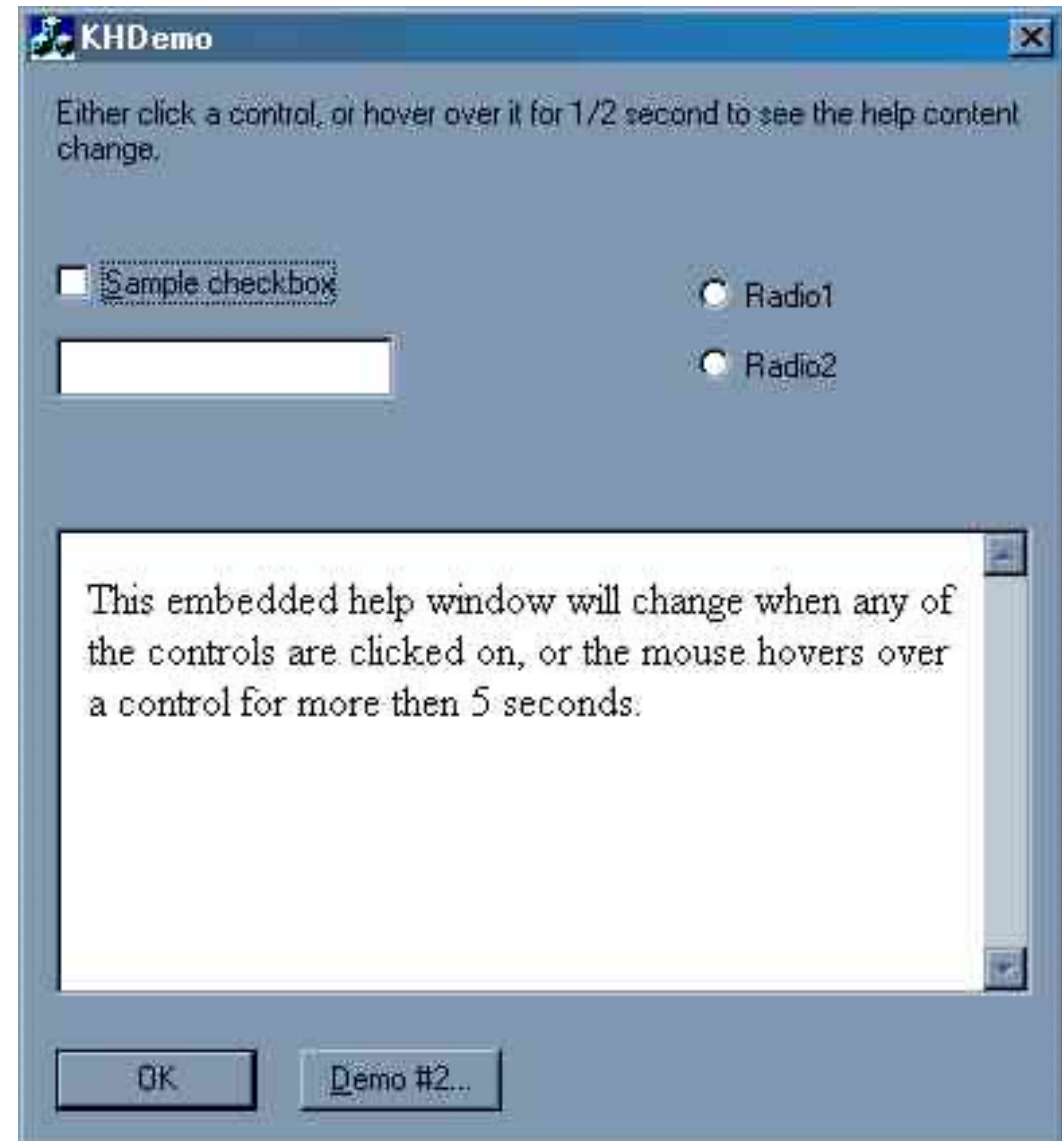


Personal Finance Blog
[MintLife.com](https://mintlife.com)

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10. Help and documentation

- easy to search
- focused on the user's task
- list concrete steps to carry out
- not too large



Consider the following usability problem

*There is no **search facility on the main page** of the application.*

Which of the five heuristics below characterises best this problem? (Choose one only)

1. Recognition rather than recall
- 2. Flexibility for efficient use**
3. Aesthetic and minimalist design
4. Help users recover from errors
- ~~5. Help and documentation~~

Consider the following usability problem

The front page contains too much information, and not all of it is useful.

Which of the five heuristics below characterises best this problem? (Choose one only)

1. Recognition rather than recall
2. Flexibility for efficient use
3. Aesthetic and minimalist design
4. Help users recover from errors
5. Help and documentation

Consider the following statement

Which of the heuristics below are addressing the design requirement: “Minimise errors”?
(Choose as many as required)

- 1. Recognition rather than recall
- 2. Flexibility for efficient use
- 3. Aesthetic and minimalist design
- 4. Help users recover from errors
- 5. Help and documentation

Consider the following statement

Do not include information that is irrelevant or rarely needed.

Which of the five heuristics below is related to this statement? (Choose one only)

1. Recognition rather than recall
2. Flexibility for efficient use
3. Aesthetic and minimalist design
4. Help users recover from errors
5. Help and documentation

Consider the following statement

Users should be able to find the information they want within 3 mouse clicks.

Which of the five heuristics below is related to this statement? (Choose one only)

1. Recognition rather than recall
2. Flexibility for efficient use
3. Aesthetic and minimalist design
4. Help users recover from errors
5. Help and documentation

Consider the following statement

Humans' short term memory can retain only about 5-9 items at one time.

Which of the five heuristics below is related to this statement? (Choose one only)

1. Recognition rather than recall
2. Flexibility for efficient use
3. Aesthetic and minimalist design
4. Help users recover from errors
5. Help and documentation

Consider the following statement

The time required from a user to rapidly move the mouse to a target area, is a function of the distance to the target and the size of the target.

Which of the five heuristics below is related to this statement? (Choose one only)

1. Recognition rather than recall
- ~~2. Flexibility for efficient use~~
3. Aesthetic and minimalist design
4. Help users recover from errors
5. Help and documentation

Consider the following statement

Minimise user memory overload by making objects, actions and options visible.

Which of the five heuristics below is related to this statement? (Choose one only)

1. Recognition rather than recall
2. Flexibility for efficient use
3. Aesthetic and minimalist design
4. Help users recover from errors
5. Help and documentation

Heuristic evaluation

- ▶ Developed by Jakob Nielsen
- ▶ Helps find usability problems in a User Interface (UI) design
- ▶ Small set of evaluators used to examine UI (from 3 to 5)
 - Each checks for compliance with usability principles - *heuristics*
 - Use multiple evaluators as each will identify different problems
- ▶ At end of session problems are compiled and used to inform re-design

Severity Ratings

- Combination of
 - Frequency of problem
 - Impact of problem
 - Persistence of problem - one of or repetitive
- Calculate after evaluations complete
 - Each evaluator rates each problem
- Provides an indication of the need for more assessment and/or redesign

Severity Ratings

- 0 - don't agree that it is a usability problem
- 1 - it's a cosmetic problem
- 2 - minor usability problem
- 3 - major usability problem (important to fix)
- 4 - usability catastrophe (imperative to fix)

Severity Ratings Example

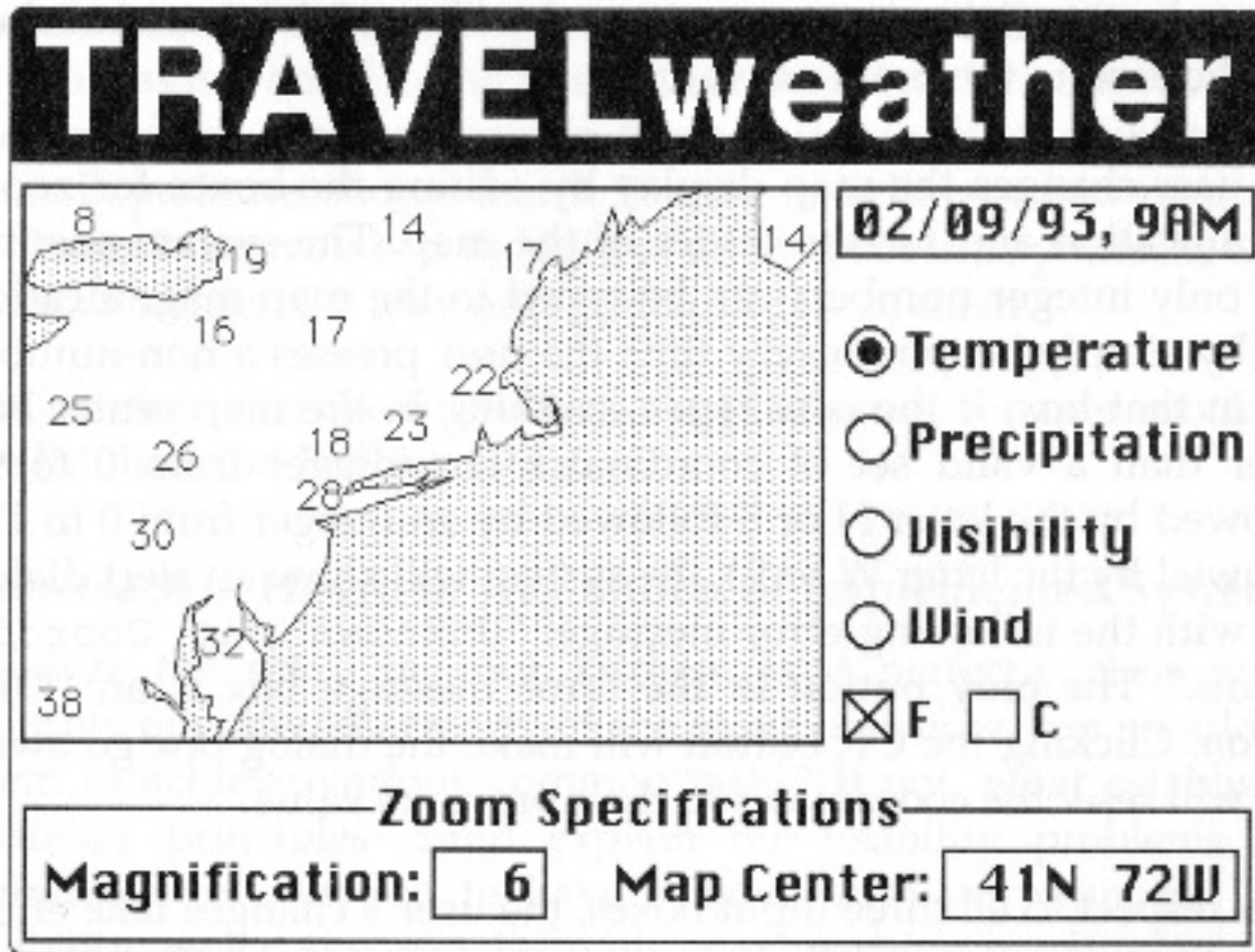
The interface used the string "Save" on the first screen for saving the user's file, but used the string "Write file" on the second screen. Users may be confused by this different terminology for the same function.

➡ [H4 Consistency] [Severity 3]

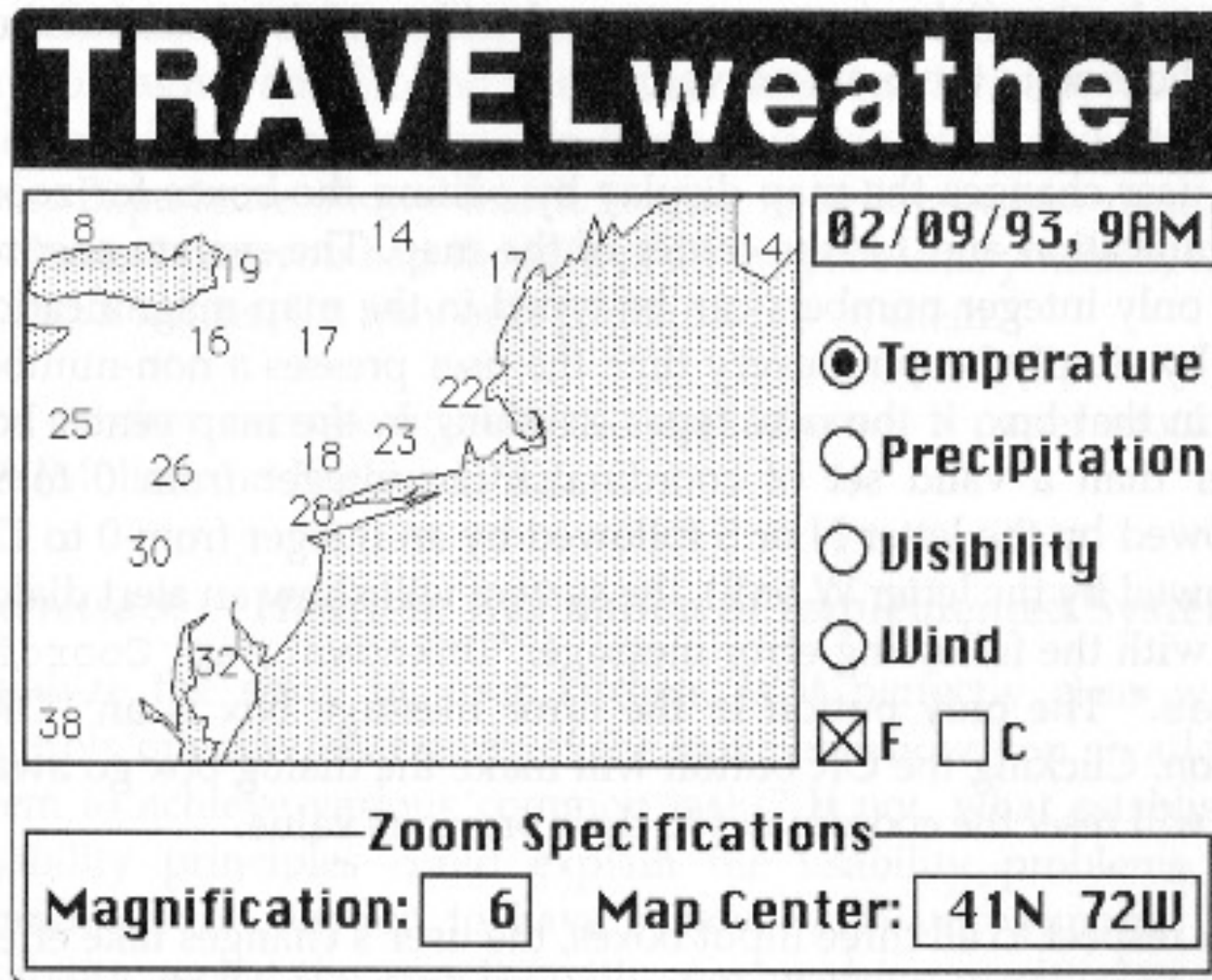
Examples

- Can't copy data from one window to another
 - violates H7 “flexibility and efficiency of use”
 - Severity rating: 3
 - fix: allow copying
- Typography uses mix of upper and lower case formats and fonts
 - violates H4 “Consistency and standards”
 - slows users down
 - Severity rating: 2
 - fix: pick a single format for entire interface

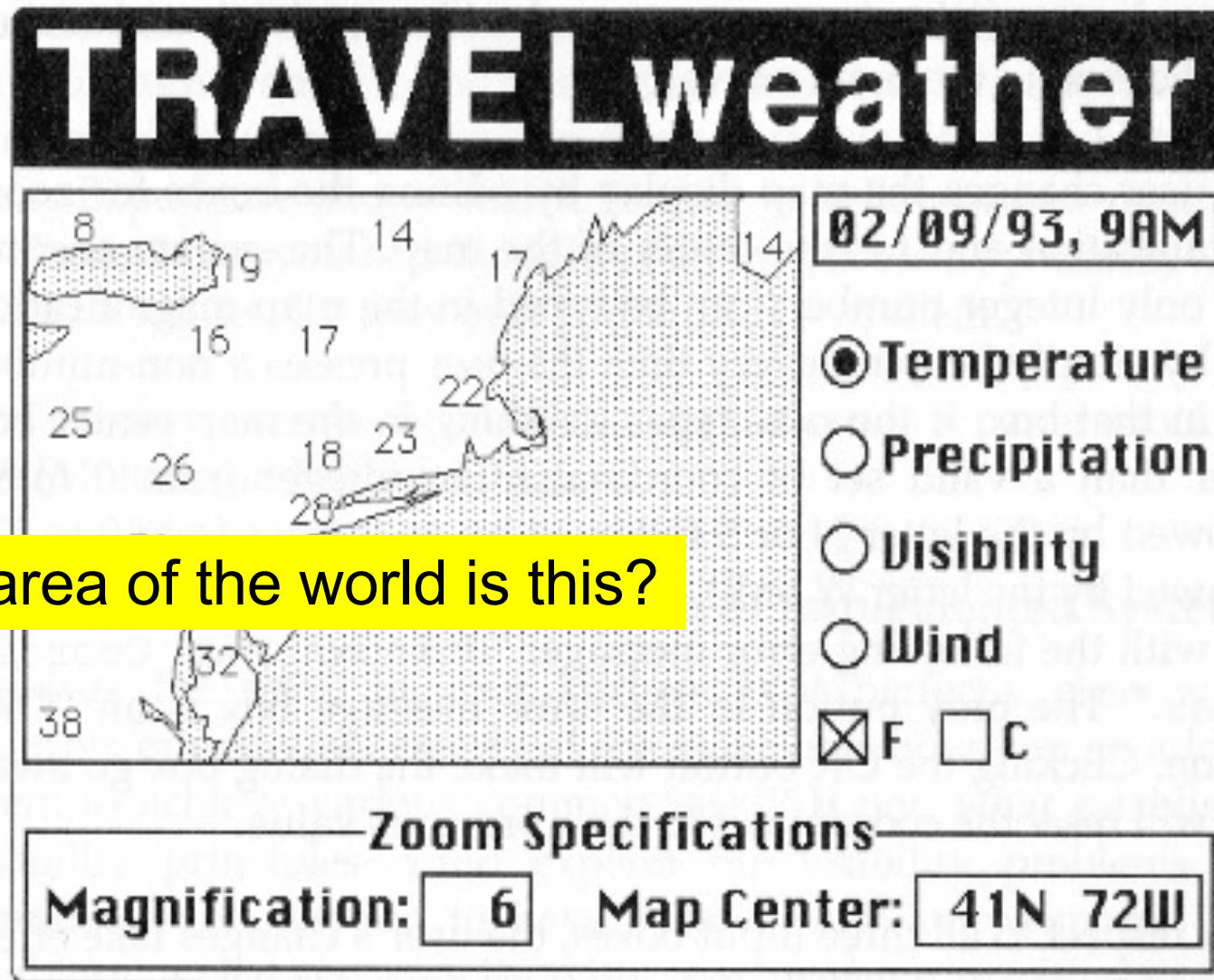
Exercise



H6: Recognition Rather Than Recall

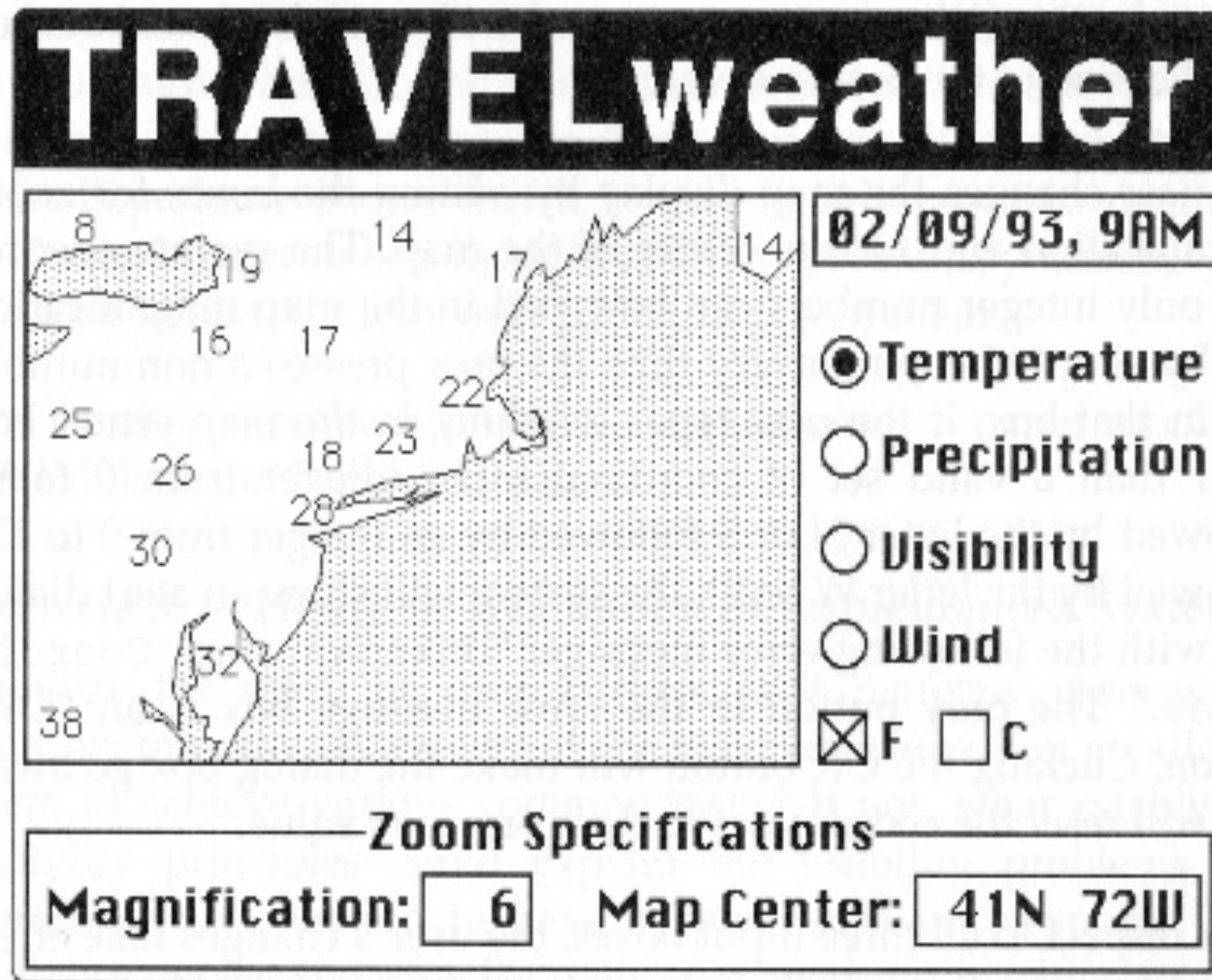


H6: Recognition Rather Than Recall

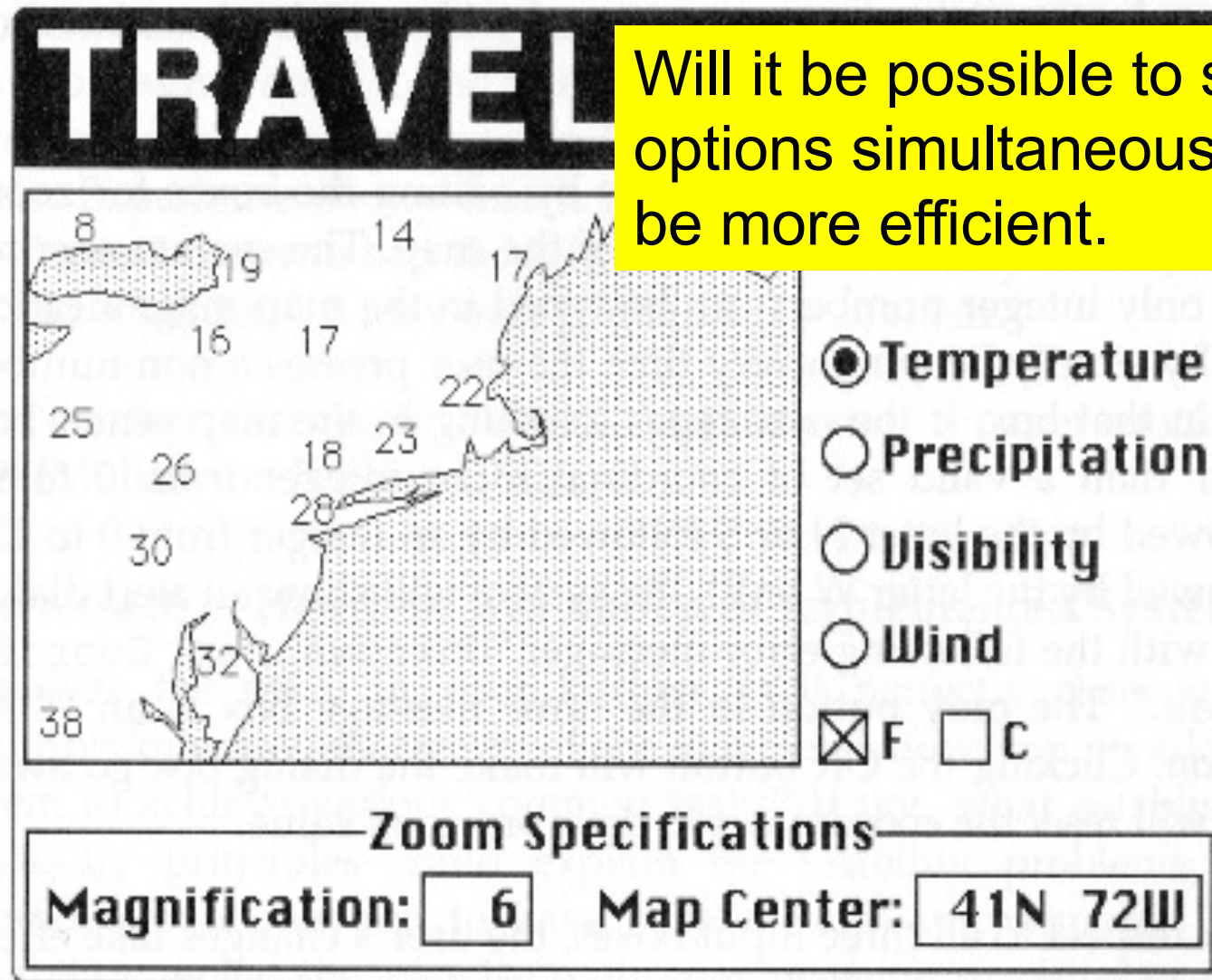


What area of the world is this?

H7: Flexibility and Efficiency of Use

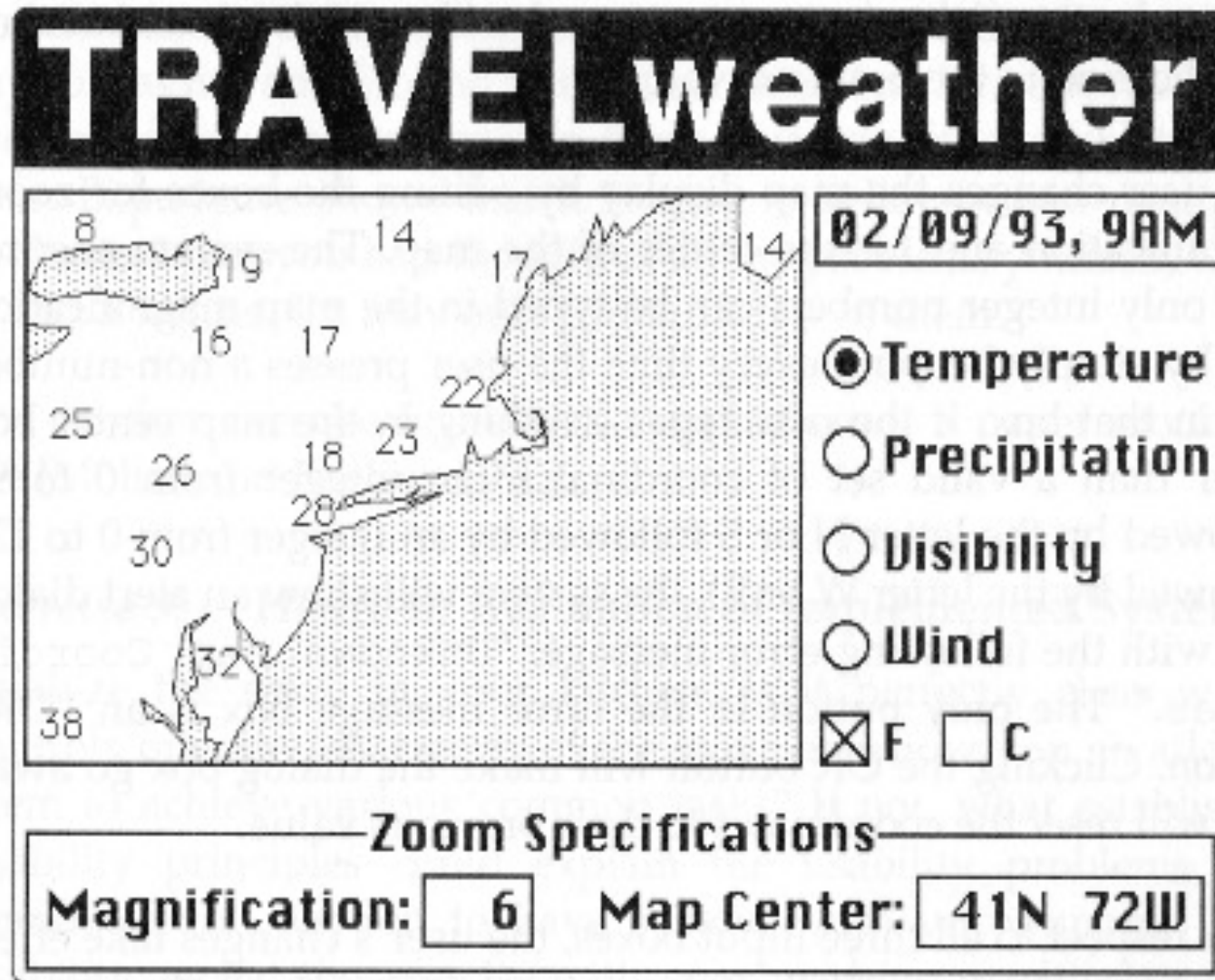


H7: Flexibility and Efficiency of Use

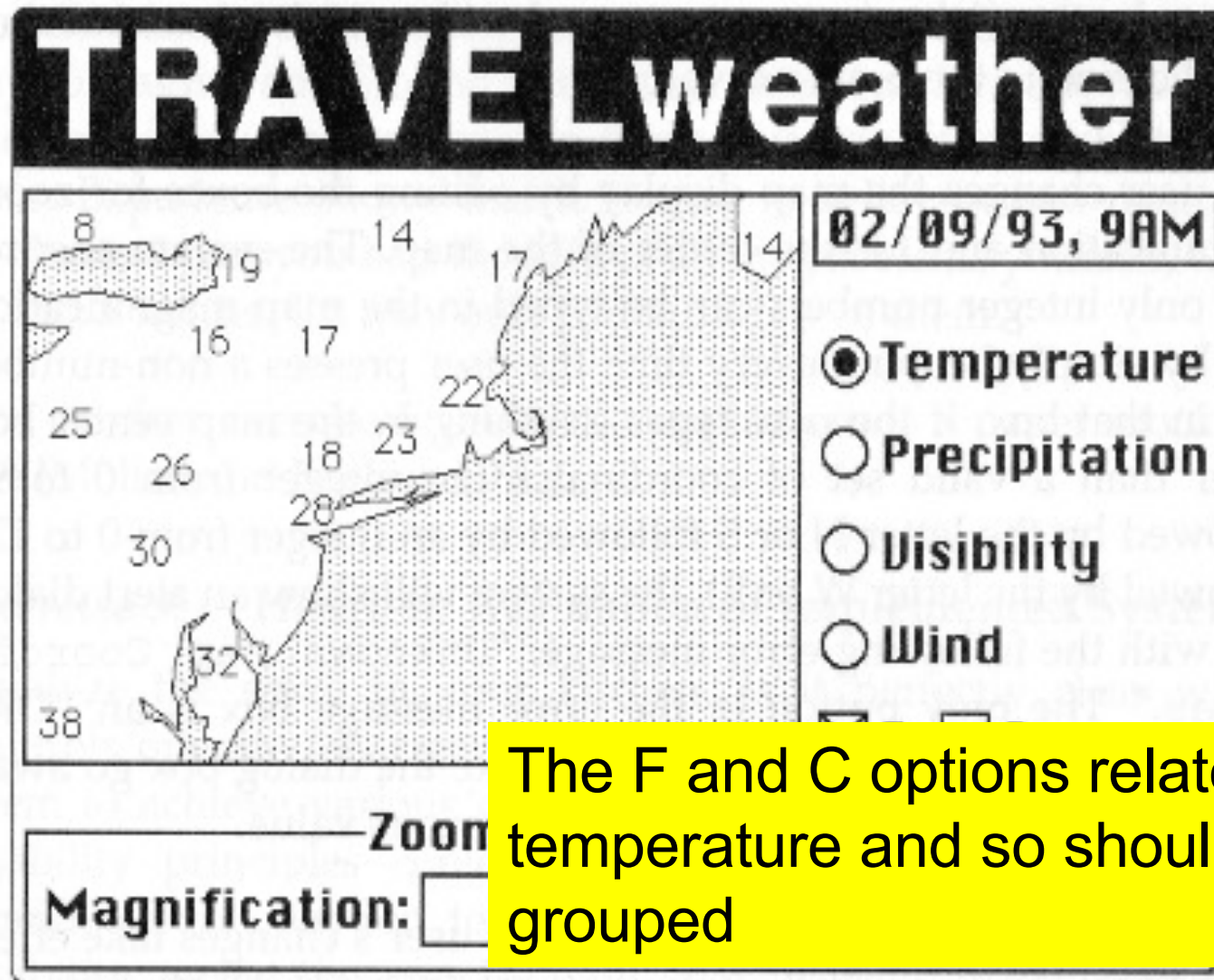


Will it be possible to select these options simultaneously? It would be more efficient.

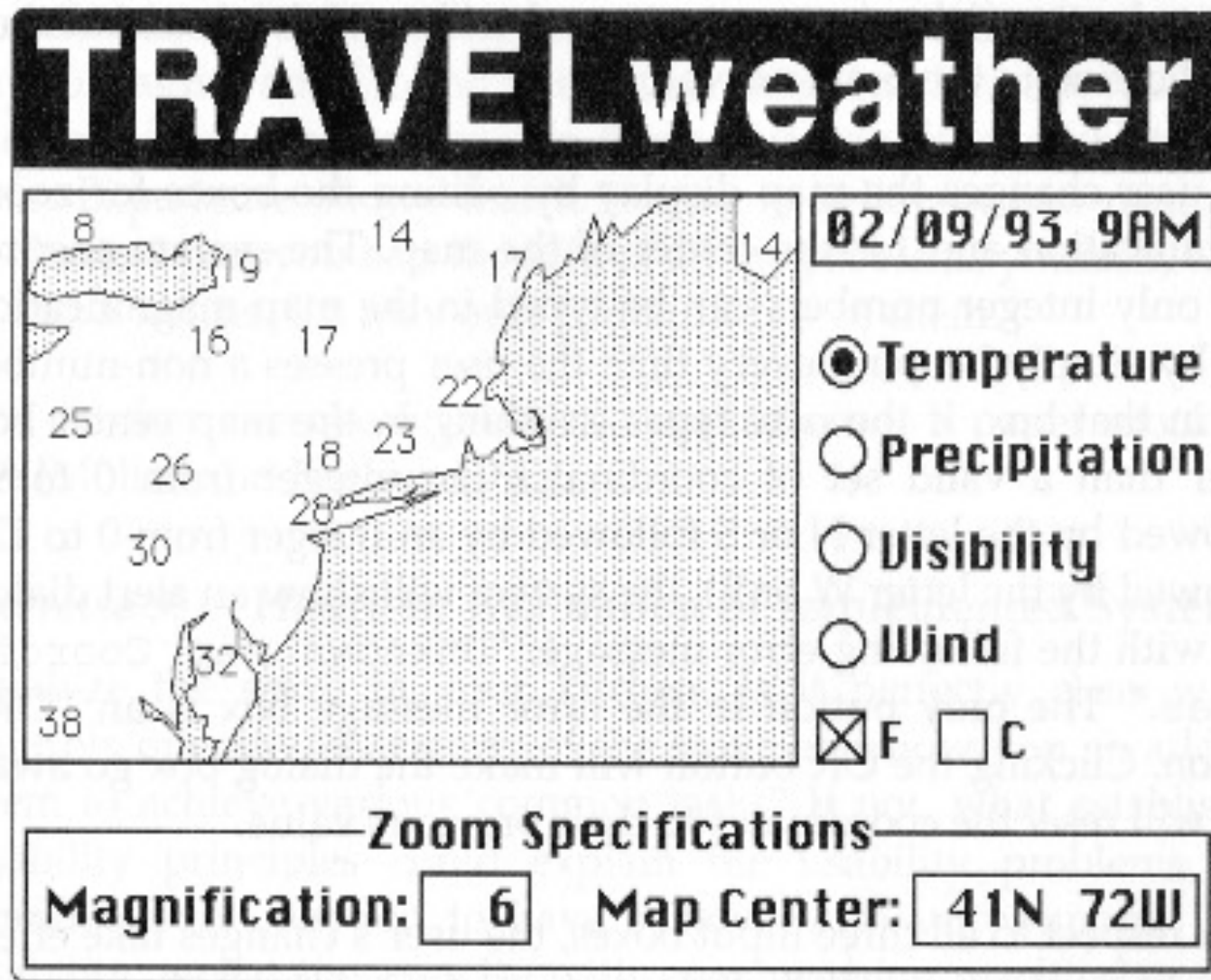
H8: Aesthetic and Minimalist Design



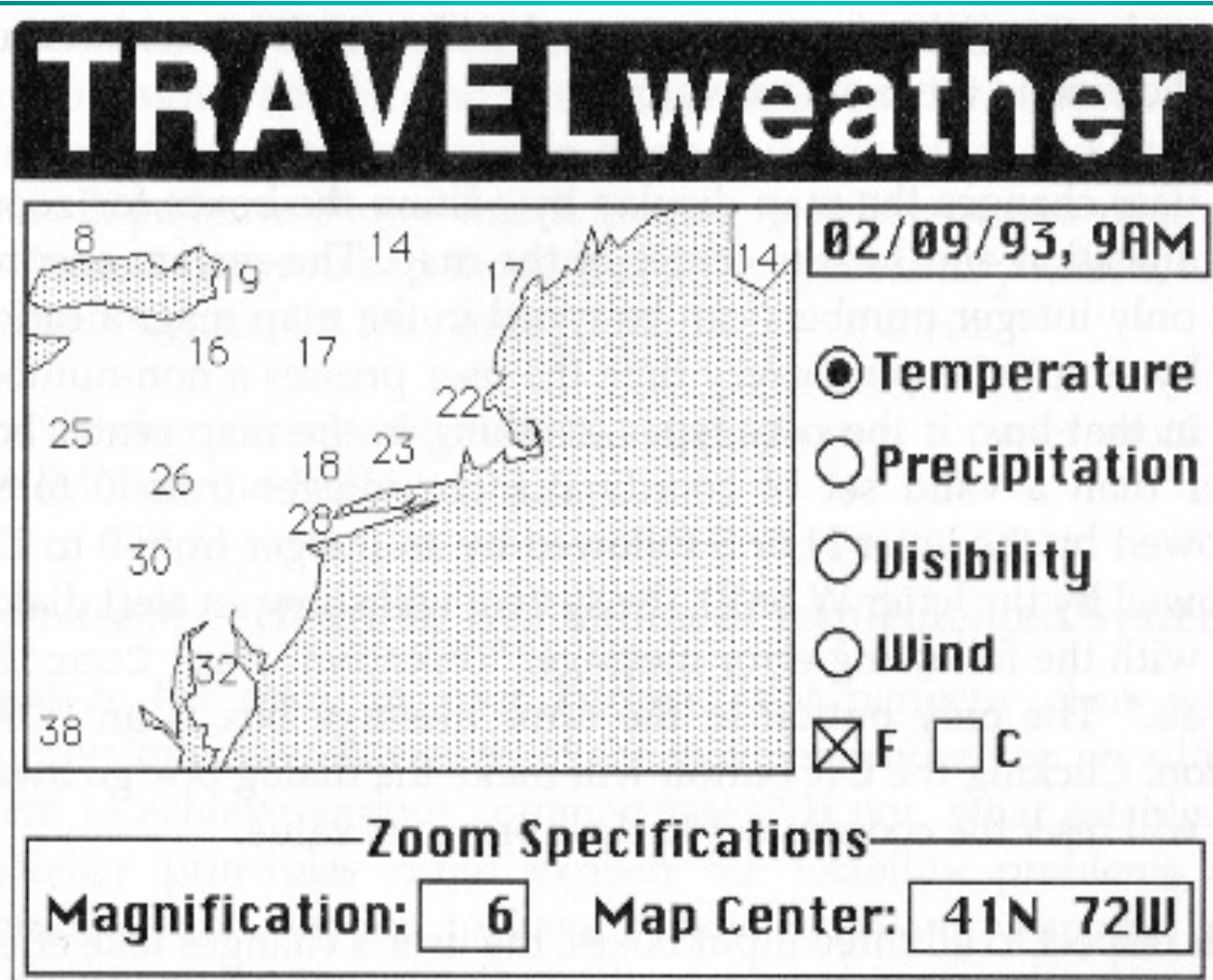
H8: Aesthetic and Minimalist Design



H9: Help Users Recognize and Recover From Errors

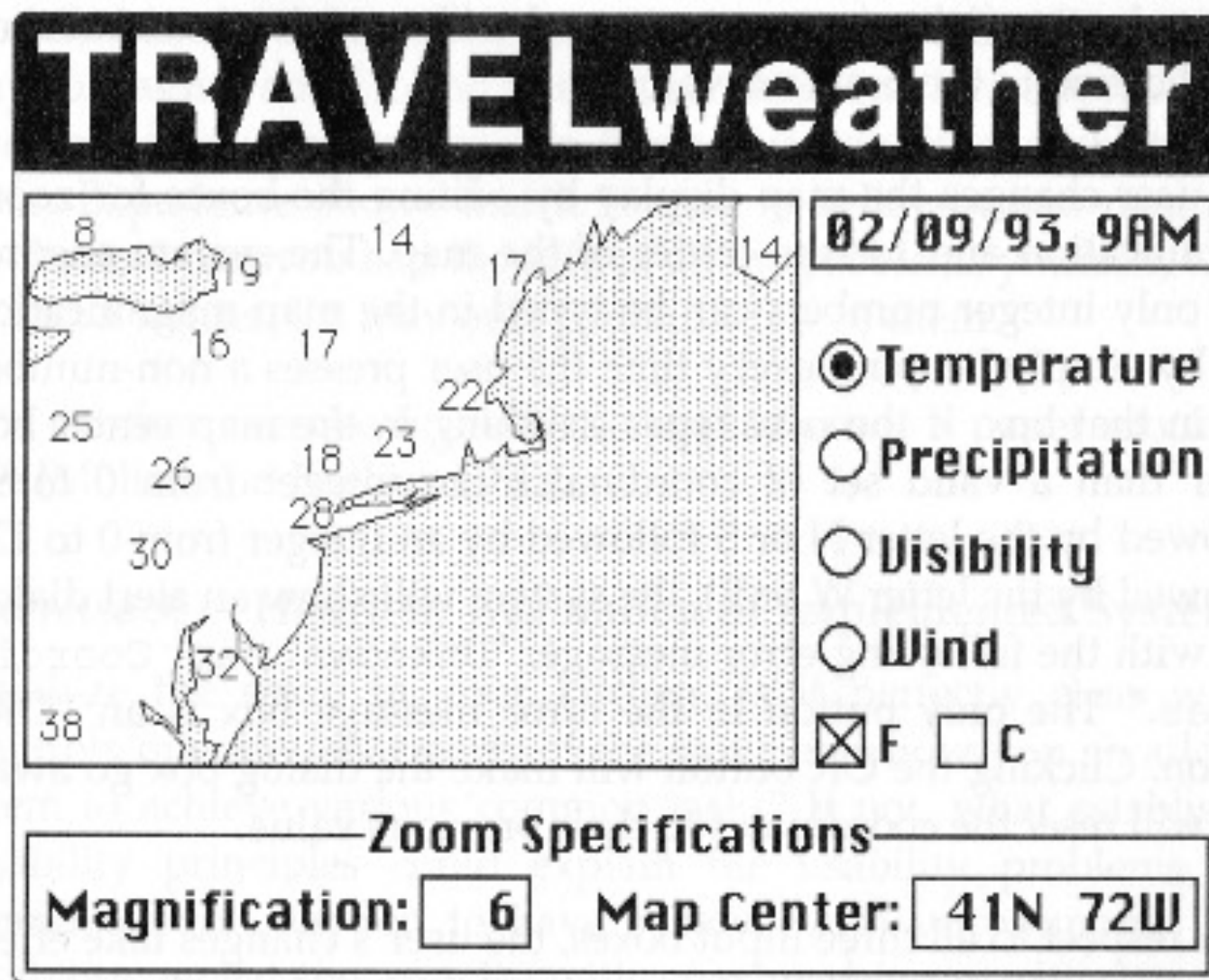


H9: Help Users Recognize and Recover From Errors



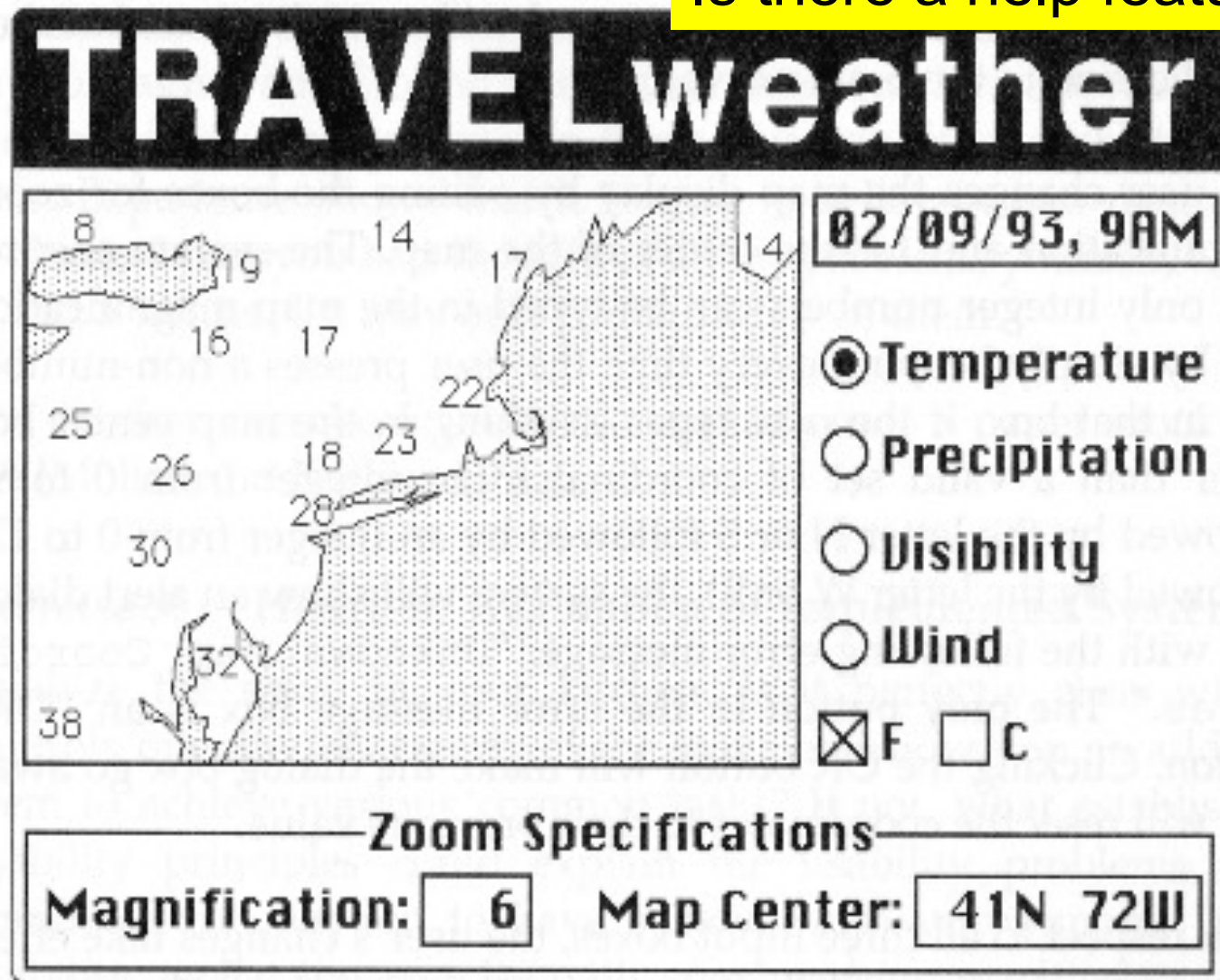
Whenever unreasonable magnification values are entered, a constructive error message should be provided

H10: Help and Documentation



H10: Help and Documentation

Is there a help feature?



Questions?

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