

Unit 7

User Interfaces

User Interfaces

- Cheaper and more powerful personal computers are making it possible to perform processor –
نیازمند قدرت زیاد در پردازش پیشرفت غیرمنتظره intensive tasks on the desktop. Break –through in technology, such as speech recognition , are
تلفیق enabling new ways of interacting with computers. And the convergence of personal computers
گسترش می دهد and consumer electronics devices is broadening the base of computer users and placing a new
emphasis on ease of use. Together , these developments will drive the industry in the next few
years to build the first completely new interfaces since SRI international and Xerox's palo Alto
Reserch Center did their Pioneering research in to Graphical User Interfaces (GUI) In the 1970s.

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- ^{کنار گذاشتن} True, its unlikely that you'll be ready to toss out the keyboard and mouse anytime soon. In deed, a whole cottage industry –inspired by the hyperlinked design of the World Wide Web –^{صنعت کامل خانگی} has sprung up to improve today's graphical user interface. Companies are ^{سر در آورده است} developing products that organize information graphically in more intuitive ways. XML –^{شهودی} based formats enable users to view content, including local and network files , whiten a single browser interface. But it is the more dramatic innovations such as speech ^{آماده هستند تا دیگر گون کنند} recognition that are poised to shake up interface design.

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- Speech will become a major component of user interfaces and applications will be completely redesigned to incorporate speech input. ^{به اندازه کف دست} Palm –size and handheld PCs, with ^{کوچک و توی هم رفته} their cramped keyboards and basic handwriting recognition, will benefit from Speech technology.

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- اگر چه Tough speech recognition may never be a complete replacement for other input devices, future interfaces will offer a combination of input types , a concept known as multimodal input. A mouse is a very efficient device for desktop navigation, for example, but not for changing the style of a paragraph. By using both a mouse and speech input , a user can first point to the appropriate paragraph and then say to the computer, 'make that bold.' Of course , multimodal interfaces will include ^{شامل خواهند بود} more than just traditional input devices and speech recognition. Eventually , most PCs will also have handwriting recognition, Text To Speech(TTS),the ability to recognize faces or ^{حرکات} gestures and even the ability to observe their surroundings.

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- At the Intelligent Room, a project of Massachusetts Institute of Technology's Artificial Intelligence Lab, researchers have given sight to PCs running Microsoft windows through the use of video cameras. 'Up to now, the PC hasn't cared about the world around it,'
توجه نکرده است
said Rodney A. Brooks, the director of MIT'S Artificial Intelligence Lab. When you
آزاد می کند
combine computer vision with speech understanding, it liberates the user from having to sit in front of a keyboard and screen.

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- Its no secret that the amount of information –both on the Internet and within intranets –at سرانگشتان the fingertips of computer users has been expanding rapidly. This information onslaught has یورش اطلاعاتی led to an interest in intelligent agents , software assistants that perform tasks such as retrieving and delivering information and automating repetitive tasks. Agents will make computing significantly easier. They can be used پیشخوانهای خدمت as web browsers, helpdesks and shopping assistants. Combined with the ability to look and listen, intelligent agents will bring personal computers one step closer to behaving more like humans.

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- This is not an accident. Researchers have long noted that users have a tendency to treat their personal computers as though they were human. By making computers more social , they hope to also make them easier to use. As these technologies enter mainstream applications, they will have a marked impact on the way we work with personal computers soon, the question will be not ‘ what does software look like’ but ‘how does it behave?’

Exercises1

Mark the following statements as True or False (T/F):

- F** a. Fewer people are using computers because computer functions are becoming integrated into other electronic devices.
- F** b. Keyboards and mice will soon not be required for using personal computers.
- F** c. There have been no improvements in interface design since the development of the GUI.
- F** d. Speech recognition is likely to completely replace other input devices.
- e. Computer speech and vision will free the users from having to sit in front of a keyboard and screen.
- f. Intelligent agent will make computers seem more like humans.

Exercises 2

Find the answer to these questions in the following text:

1. What developments are driving the development of completely new interfaces?
2. What has inspired a whole cottage industry to develop to improve today's graphical user interface?
3. In what way have XML –based formats changed the user interface?
4. What type of computers are certain to benefit from speech technology?

Exercises 2

Find the answer to these questions in the following text:

5. Name a process where a mouse is particularly useful and a process where it is not so useful.
6. What facilities are multimodal interfaces likely to offer in the future?
7. What type of input device will be used to give vision to the user interface?
8. What development has led to an interest in intelligent agents?
9. List ways in which intelligent agents can be used?

Exercises3

Match the terms in Table A with the statements in Table B:

	Table A	Table B
iii	a. GUI	I. Software assistant that performs tasks such as retrieving and delivering information and automating repetitive tasks.
v	b. Multimodal interface	II. Text To Speech
i	c. Intelligent agent	III. Graphical user interface
ii	d. ITS	IV. A project of the Massachusetts Institute of Technology's Artificial Intelligence Lab.
iv	e. The Intelligent Room	V. A system that allows a user to interact with a computer using a combination of inputs such as speech recognition, handwriting recognition, text to speech and etc.