Learning Merlin with WarpGuide

IBM tackles OS/2 Warp 4.0 training and ease of use. By David P. Both

IBM's latest version of OS/2, code-named Merlin and officially called OS/2 Warp 4.0, has two important features that are instrumental in making the operating system easier to learn and use than its predecessors. One of these new features, the WarpGuide, is brand new; the other is an enhanced online tutorial. Taken together, these two features can make life easier for anyone who needs to learn—or teach—OS/2 Warp 4.0.

Everything actually starts at the Assistance Center, a new top-level folder that contains the old Information folder, many of the online books and *.readme* files, and the WarpGuide and tutorial.

WarpGuide

WarpGuide is a single intelligent entity within OS/2 Warp 4.0 that is designed to facilitate your interaction with the user interface. One key component is a set of informative Cue Cards that appear on certain infobox pages. These Cue Cards provide guidance and explanations for specific fields on selected pages of the infobox. The other component is the "Guides," analogous to Windows 95's Wizards. Guides are alternative, simplified methods for performing some common tasks, such as adding a printer, adding program object, customizing the system, or finding c jects on the hard disk.

WarpGuide can provide guidance for users with diff ent levels of expertise. A new user can register with Wa Guide using the "User Check-in for WarpGuide" Gui By registering the names of multiple users and specify the level of experience each has, WarpGuide can prov customized assistance to different users of the sa machine. It is only necessary to tell OS/2 which use currently using the system.

Figure 1 shows the User Check-In for WarpGuide. No the Cue Card displayed above the top of the window, outline around the area of the window with which the is currently working, and the shading over the rest of window. These three elements of WarpGuide are use focus the user's attention on the specific area of the dow for which guidance is provided.

The Cue Cards

WarpGuide's Cue Cards provide brief advice and guid for OS/2 users attempting to perform some selected mon tasks. They are *not* designe provide more in-depth infoma which is available by pressing <F clicking on the Help button.

IBM refers to WarpGuide as an ligent agent, meaning that it ke database of the user's interactions a task and changes the presented ance to novice, intermediate vanced, or expert level accordingl

An overview portion of th Cards contains additional inform that is particularly useful to a user. The overview usually prov more detailed description of the be performed, along with some tional information about how form it. Click on the Informatio on the Cue Card to get a pop-up that allows you to turn o overview or manually override t experience level.

Compare the information o ing mouse pointers on the Cue Figure 2 to the overview infor

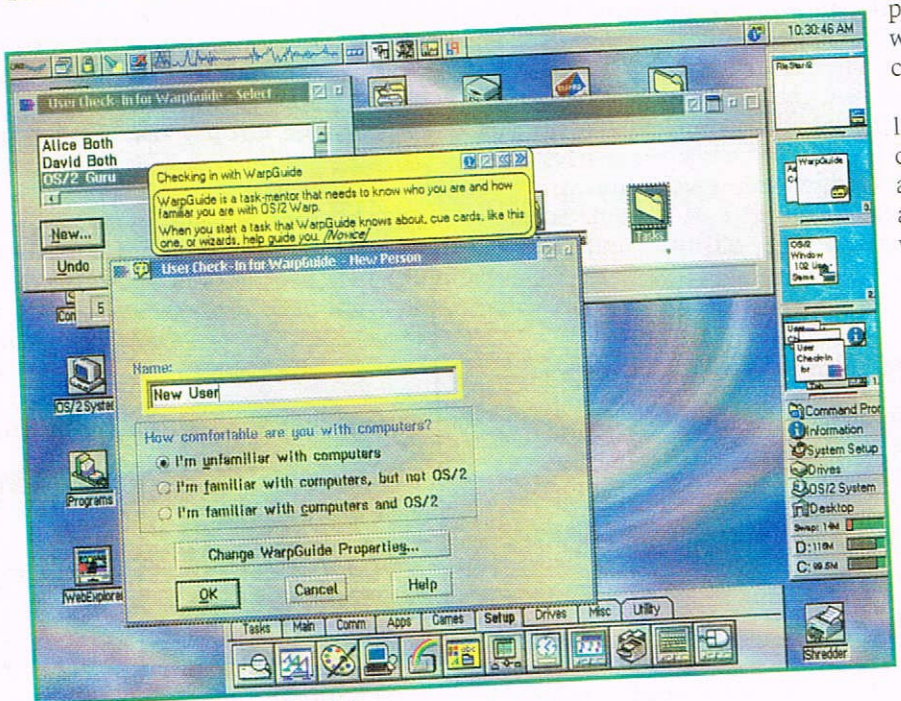
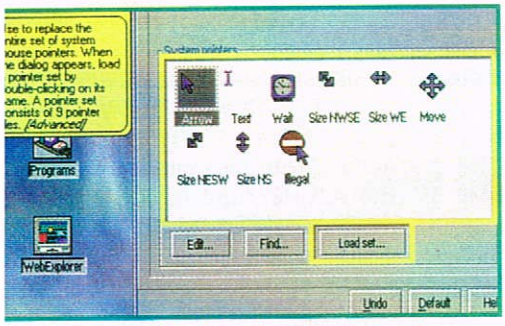


Figure 1: WarpGuide's User Check-in.



gure 2: Advanced level Cue Card for mouse setup.

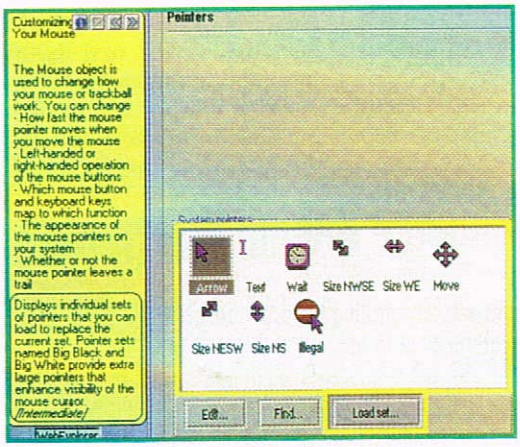


Figure 3: Intermediate level Cue Card with overview.

r the same task displayed by the Cue Card in igure 3. The additional information in the overiew describes everything you can do to cusomize the mouse. The task-specific information overs the selection of pointers. Notice the difference etween the intermediate text in Figure 3 and the advanced ext in Figure 2. In addition, the advanced mode doesn't isplay shading—only outlines remain, helping the user ocus on the portion of the window referred to by the Cue ard text.

WarpGuide Cue Cards are designed to focus the user's ttention. The Cards are useful for users who have had ome training on OS/2 but need some coaching to enable hem to properly complete the tasks. Cue Cards provide vert guidance to users needing it and automatically ecome less obtrusive as the user gains experience. They an be used to reinforce whatever training a user has had.

he "Guidance on..." tools

VarpGuide "Guidance on..." tools—I call them Guides—rovide new users with easy, alternative methods for perorming common tasks. They are especially useful when a ser has little or no training on the tasks that the Guides over. These Guides can be used instead of OS/2 Warp .0's properties infoboxes (which replace the OS/2 Warp .x Settings notebooks) to perform tasks such as adding a rinter object. (More experienced users can still use the roperties infoboxes directly.)

How do you get to the Guides? Activate the WarpCenter, click on the Assistance Center icon, and open the VarpGuide folder. Then click on the specific Guide for he task you want to perform. You can also open the ssistance Center folder on the desktop, then open the VarpGuide folder, and select the Guide you want (Figure 4).

To obtain guidance on adding a rinter, click on the Guide of that name and follow the instructions that appear. You will be taken step by step through the process of creating a printer object.

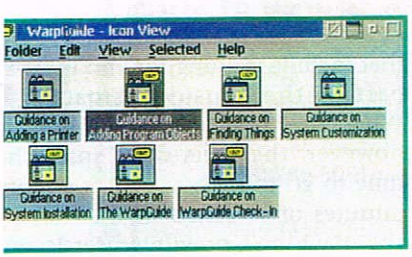
Figure 5 shows the window in which the printer is named. Using a template is faster and easier for experienced users, but these Guides provide new users with highly focused, discrete subtasks to perform, rather than making them guess at items in a notebook. Very explicit instructions accompany each subtask to help avoid any confusion.

Figure 6 shows the dialog box for choosing a printer. This task is simplified for new users who have a printer that is unsupported by IBM. Clicking on the "I have a disk" button leads to a dialog that lets the user specify the location of the disk containing the driver. The printer driver is then installed from the selected disk.

The Guides offer inexperienced users an alternative to the more complex properties infoboxes, providing a way for those without a great deal of training or knowledge to configure some aspects of OS/2. This capability can be a double-edged sword, however, because some IS managers won't want their users to make configuration changes to the operating system. Those IS managers may want to delete the existing Guides so their users don't have access to anything that can alter the system configuration in any way.

The biggest failing of WarpGuide—at least in the Merlin beta—is that none of the Guides or Cue Cards help with OS/2's networking and connectivity setup. Because OS/2 Warp 4.0's powerful networking features are big selling points, the lack of WarpGuide support for them is a significant weakness.

IBM's WarpGuide development team is creating a toolkit—to be shipped in a future release of the Developer Connection CD-ROM—that will allow application developers to create Guides and Cue Cards for their own applications.



igure 4: WarpGuide folder.

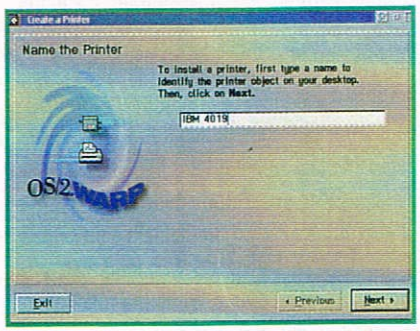


Figure 5: Creating a printer object is broken down into discrete subtasks.

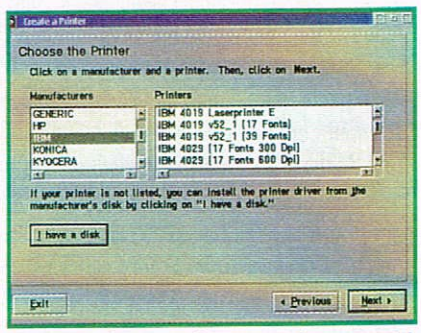


Figure 6: Choosing the printer is easy with this panel.

The new tutorial

Did you run the tutorial included with OS/2 Warp 3.0? According to IBM, about one-third of all OS/2 users have tried the tutorial. If that number is correct, it's just far too small! A tutorial should be the first place for new users to explore a new operating system and its unique features and to practice basic operations.

OS/2 Warp 4.0's tutorial was not included in the beta because it wasn't ready. However, while I wa Austin, Tex., participating in an task analysis group to help dev the Merlin certification test, I able to work with the unfini products. (My thanks to IBM's J Adams, who facilitated my acce the tutorial, and to Jill Timm new tutorial's creator.)

The new tutorial has four r sections: Base Operating Sys Connect, VoiceType, and Help. of these sections is fairly short easy to complete in a reason amount of time—well under an in each case. The Help section i shortest and should only take fi ten minutes.

When I sat down at the Tes tutorial, I registered as a new but did not train the VoiceType tem to recognize my voice patt With the exception of a few c mand words that had not yet l incorporated into VoiceType, I able to successfully navigate the torial using voice commands al including the practice exercis was even able to use voice c mands to navigate when a caused the main menu button disappear, disabling mouse and board navigation. Ms. Timm ass me that the command words wi added and the bug will be fixe the time Warp 4.0 ships.

One powerful feature is the tu ial's ability to provide a real desl on which users can practice the a ities that they have been learn The beauty of this feature for users is that they can use the s methods for navigating the tut as they can for practice and nor usage, whether that method is board, mouse, voice, or any comb tion of methods. As a result, nav tion is consistent between the le ing environment and the real w environment.

A course of study

As a consultant, I generate propo that include training for end user part of the consulting packa When the time comes for traini however, the users can't spare time to go to a class. Ten or twe minutes of so-called instruction the machine's previous user is training; neither is grabbing a

The Intelligence Behind WarpGuide

WarpGuide represents a new way of coaching the user through tasks. While in Austin a few weeks ago, I was fortunate enough to talk to the WarpGuide project leader, Les Wilson.

The idea for WarpGuide can be traced to an article about IBM's research at its Almaden facility. The article, entitled "Coach: A Teaching Agent that Works," appeared in the July 1994 issue of *Communications of the ACM* (Association for Computing Machinery). Using this article as a starting point, Wilson and a team of researchers, developers, and psychologists created an intelligent agent that is able to adapt to individual usage patterns and respond with appropriate guidance.

Mr. Wilson and his colleagues recognized that the design of current user interfaces reflects the way the designers of those interfaces think, rather than how the users of interfaces think. To determine the level of guidance provided on the Cue Cards, WarpGuide uses a lightweight artificial-intelligence (AI) engine that contains an internal model of how a user views and reacts to the interface. The AI considers factors such as the number of times the user has accessed a given element of the interface, the length of time between the accesses, and the amount of time spent on each element. This information is stored and used to make a judgment regarding the user's familiarity with the task or element grouping. WarpGuide then guides the user through the correct sequence of subtasks required to complete a task, such as creation of a printer object. "If the user chooses not to follow the usual path [through the task]," Mr. Wilson said, "WarpGuide adapts to follow the new sequence chosen by the user." For example, when creating a printer object, users don't usually print to a file. When a user chooses this direction, however, WarpGuide alters the guidance provided to direct the user to complete the task properly despite the change.

An intelligent agent like WarpGuide, Mr. Wilson continues, "allows the user to explore the user interface and get information regarding what it is, what to do, and what can be done with a specific element of the interface." Through such exploration, the user gains knowledge of and experience with the interface.

WarpGuide is activated when the user does something that the system recognizes. Using basic communication theory, WarpGuide sends information in the form of Cue Cards to the user through the channel of the interface. WarpGuide measures the user's response and stores that information so as to determine the user's experience level the next time he or she performs the same task.

According to Mr. Wilson, "The trend is to move information presentation from the traditional interfaces to in-your-face, proactive behavior. This is a step above field-level help and is the next step in user interface help development, because it works with the user's perception of what is happening."

Another indication of the level of sophistication in the WarpGuide is that its behavior changes are not discrete steps. For example, when the AI determines that you are ready for more information, but aren't out of the novice level, it will present the intermediate text in addition to the novice text. As the user demonstrates more experience, it stops the shading but retains the Cue Card and highlighting border. At the advanced level, the AI simply places the WarpGuide icon on the title bar so the user can call on it when needed. WarpGuide can also return the guidance presented to a previous level if, for example, you have not performed a particular task in a long time.

Mr. Wilson is well aware that this is only the beginning for WarpGuide. While the function of WarpGuide is complete, he would like to see WarpGuide become aware of more tasks.

ninutes from a busy IS person. Users ire often shown, not taught, the key-trokes or mouse input required to perform specific job tasks. They are seldom trained on the basic tasks of the environment in which they work.

A training course has specific objectives that must be met and must be measurable. When a user can perform the tasks required to meet the objectives of the course, the user can be considered trained.

OS/2 Warp 4.0's tutorial has been designed with a specific set of educational objectives in mind. It will train a beginner to use the OS/2 user interface, the voice recognition capabilities, the basic network functions (such as logging on and using network directories and printers), and the online help.

WarpGuide is a complex, sophisticated adjunct to the tutorial, the online OS/2 help, and the documentation. With WarpGuide, IS managers have at hand a pair of top-notch training tools within OS/2 Warp itself. Users will typically take two to four hours to complete the tutorial, depending on their initial level of knowledge and skill and the speed at which they learn. Add to the tutorial WarpGuide's ability to simplify some common tasks and provide online, real-time assistance, and you have an unbeatable combination for organizations needing to improve OS/2 Warp skills. Those IS professionals with training responsibilities would do well to use these tools, which are readily available and free.

Users should complete the tutorial; it only takes a short time. Trainees should be encouraged to use the tutorial's Practice facility to ensure that they can actually perform the tasks about which they are reading. Ideally, they should be given an environment in which they will be uninterrupted by their daily jobs, such as a classroom setting. However, if classroom facilities, instructors, and an IS department are lacking, four relatively short sessions with the tutorial at his or her desk should take the new user through all four sections.

All things considered, the changes that IBM has made to ease learning and using OS/2 Warp are a giant step in the right direction. IS managers and trainers should be very happy with these aspects of OS/2 Warp 4.0. OS/2

David Both is president of Millennium Technology Inc., a consulting firm based in Raleigh, N.C., that specializes in OS/2 Warp products. He has 21 years previous experience with IBM Corp., most recently as the lead OS/2 support person for the IBM Personal Computer Co. He is an IBM-certified OS/2 engineer charter member and an instructor for OS/2 Warp, OS/2 Warp Connect, and OS/2 Warp Server. He is also co-author of the book Inside OS/2 Warp, *from New Riders Publishing. David can be reached at dboth@ibm.net.*