Closing The Gap

Computer Technology in Special Education and Rehabilitation

Portable computing - A whole new ball game!

By Brian S. Friedlander, Ph.D.

Just when you thought that you were getting comfortable with the ins and outs of the AlphaSmart 3000, the AlphaSmart Company releases the Dana and everything is topsy turvy. For many years the venerable AlphaSmart 3000 served the needs of many students with handwriting and language-based difficulties and it did so in an elegant and simple-to-use manner. With the release of Dana the AlphaSmart Company is treading on new ground and is offering a portable computing device with a great deal of power and flexibility, but along with those features comes a steeper learning curve to harness the full power of the device. AlphaSmart Inc., is positioning the Dana as a Palm-operating system (OS) based alternative to a laptop computer. For those of you are familiar and have been Palm users for some time you will feel right at home using the Dana. The Dana ships with all the basic tools one would expect on a Palm, notably the Address Book, To Do List, Calendar, Calculator, and Memo feature. In addition, AlphaSmart, Inc. now includes its very easy-to-use word processor, AlphaWord.

Using the same footprint as the AlphaSmart 3000, Dana weighs in at just two pounds with a full size "integrated" keyboard. Because Dana takes advantage of the Palm OS, it will be able to run thousands of applications that are available for the Palm. The AlphaSmart Company has heard our feedback and the backlit LCD screen on the Dana is 7.5 inches long by 2.35 inches wide, giving us considerably more real estate to type on than the AlphaSmart 3000. Users will now be able to use bit mapped fonts that are installed on the Dana which will allow them to change the size and style of the font.

Dana is built with expandability in mind and comes with two expansion slots for adding storage capacity via Multimedia Cards and Secure Digital Cards. Dana comes standard with an IrDA port for beaming to and from other IR enabled devices as well as two USB ports for printing or connecting to a computer. It is anticipated that users will get up to 30 hours of use on a Dana with the rechargeable battery. What makes Dana really unique is the ability to use the stylus that comes standard with Dana to input data right on the LCD screen. Users will be able to use Graffiti (the standard strokes that are used to write on a Palm) to input data into the standard applications that come with the Palm. Dana will allow users to have access to the Date Book, Address Book, To Do List,and the other utilities that are standard with the Palm. Dana by AlphaSmart can be configured to place the Graffiti area on the right or left side of the LCD screen. Likewise, users can change the orientation of the screen and rotate it 90 degrees which will allow them to use the screen like a clipboard. Dana is an interesting hybrid product that will certainly get a lot of attention from educators. Educators will now have a full featured word processor complete with a full array of organizational tools at their disposal.

Figure 1: Dana by AlphaSmart, Inc.

AlphaWord the heart of the Dana

Your Dana, will ship with AlphaWord, a full featured word processor complete with spell checking and a thesaurus, which will have file compatibility with Microsoft Word and AppleWorks. The Dana maps the files that you create very similarly to how it is done on the AlphaSmart 3000. There are eight File keys on the top row of the Dana and you can navigate from one file to another by simply pressing the File key that you want. The Dana, like the AlphaSmart 3000, is constantly saving what you have typed. If you would like, you can save the file with a name which are also mapped to the File number. Users will enjoy the fact that they can change the size and style of the font that is on the Dana screen. If needed, the Dana also comes with a back lit screen which you can turn on if you need to. Text selection on the screen can be made with the stylus or by using keyboard shortcuts. The AlphaSmart Company has made a concerted effort to have you rely more on using the keyboard and short cuts as opposed

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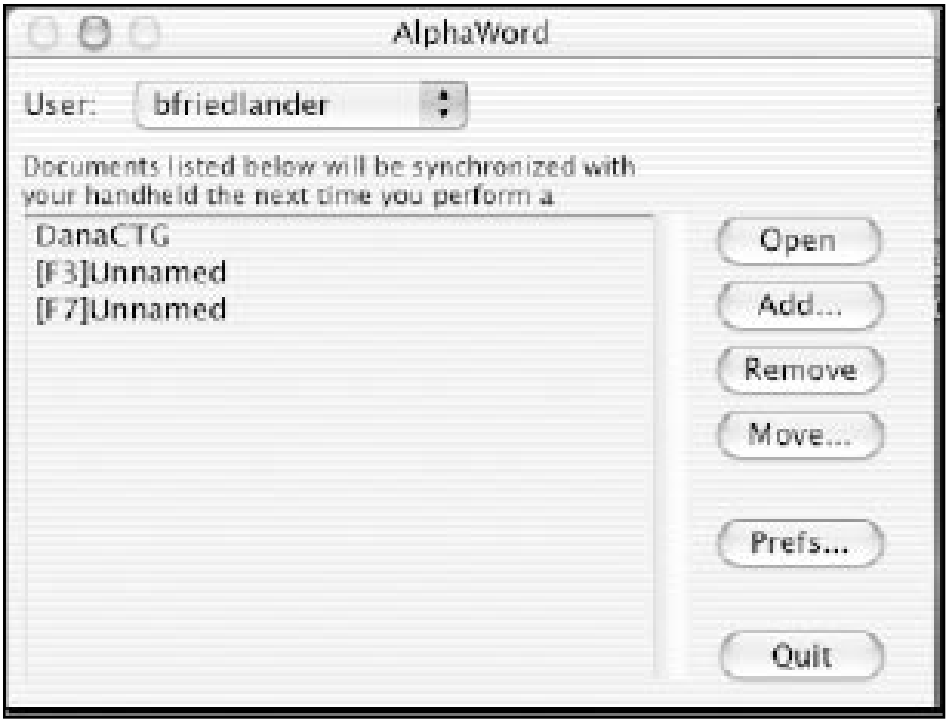

Figure 2: Alphaword Sync

to using the stylus. If you forget the short cuts, you can press on the Menu key which will drop down the menu options. Most of you will feel right at home using AlphaWord, and will think that you are using your full-featured word processor on your desktop computer. The AlphaSmart Company has bundled a version of PrintBoy which will allow you to print directly from your Dana to a USB printer or a printer with infrared (IrDA) built in. Once you have configured the PrintBoy Printer Setup, you should have no difficulty printing to IrDA enabled printers. I have successfully printed from the Dana via the IrDA port to a Canon BJ-50 and to an HP-Laserjet. Check the AlphaSmart Wsite for a list of compatible printers.

Getting started with Dana

If you have ordered a Dana and are waiting for yours to arrive, once you receive it, you will need to plug in the AC adapter and charge the unit for eight hours to get the rechargeable battery ready for use. (Note: You can charge your Dana by plugging it into the USB port but it will take longer to charge). During the time it is recharging, it is important to install the Dana software that ships on the CD. Regardless if you have been using a Palm on your PC or Macintosh, it is imperative that you install the Dana desktop software that ships on the computer you intend to use it with. Because the Dana is a Palm, it will need the updated files on the CD to properly "sync" the information on your computer with the contents of what is on the Dana. Yes, "sync" is a new term that one must get used to if you intend to use the Dana to its full capacity. As you will see, there are two ways to send information from your Dana to your personal computer. While I would never be one to make predictions, it would be safe to say that a lot of Dana users will simply type on the Dana, taking advantage of the bigger screen and the ability to change the size of the font and they will do as they did with the AlphaSmart 3000, simply send the information to their favorite word processor.

Sending text to your word processor is very easy and straight forward and very similar to how you did it using the AlphaSmart 3000. Simply go to the file that has the text you want to send, plug in the USB cable from your Dana to the USB port on your computer and press the "Send" key. As soon as you plug in the USB cable from your Dana to your computer, a dialog box appears on your Dana screen letting you know that the Dana is now emulating the keyboard and that you can send the text. Once you press the "Send" key, the text will quickly appear in your word processor. When the Dana is in the keyboard emulation mode, you can use the Dana or your standard keyboard to type on your computer.

One note, by sending text by pressing the 'Send" key, you will lose all formatting of the text that was done in AlphaWord. This is why the "synching" feature is so important. Let me explain, when you loaded the Dana desktop software that was on the CD onto your computer, you installed a number of key components or "conduits" that let the Dana and your computer interact in a friendly and harmonious manner. The "conduits" allow the Dana and your computer to define how information gets updated on either device. For example, if you changed some text in File 1 and then you "synched" your Dana, you can instruct the "conduit" to always update the file on your computer so that it is the same as the one on the Dana. In essence when you "sync" your Dana with your personal computer then the information on both the Dana and your computer will be exactly the same. While this is certainly important and gives you the assurance of having a back-up of the files, when you do a '"sync" there is more going on in the background. Likewise, when you perform a "sync" and you are using AlphaWord, all the text formatting that you did in your document is maintained and is not lost when it is sent to your computer. Getting a little technical here, the file that is sent to your computer is in a Rich Text Format (RTF) and is able to maintain the formatting that you did in AlphaWord. Almost all word processors are able to open a Rich Text Format file and maintain the integrity of the file. Depending on how you intend to use the Dana, it is important to understand the difference between "sending" text and "synching"

Sending text from the Dana to your computer

The Dana ships with another utility called AlphaWord Sync which lets you send a file from your computer to the Dana. In terms of functionality, it is similar to the Get Utility but the steps needed to send text to your Dana are somewhat different. If you have installed the software from the CD that shipped with the Dana, locate the application AlphaWord Sync. When AlphaWord Sync is open it should look like

Figure 2. To send a text file to your Dana, first open the file in your word processor and then save it in a Rich Text Format (RTF). Most word processors have the capability to save documents as Rich Text Format. Just remember when you are in the Save As dialog box to select the RTF format. After

you have completed this step, drag the file into the AlphaWord Sync application. The file name should appear in the list. In this example you will see the three files listed in the AlphaWord Sync application. The next time you perform a "Sync" the files will be moved to the Dana and can be opened and edited from within AlphaWord.

Customizing your Dana

Just like the AlphaSmart 3000, the Dana allows the user to customize the working environment to meet the needs of a wide range of students. By clicking on the Home icon on the WritePad and selecting the Keyboard, you can change a number of features. First off, it is very easy to turn the Key Repeat feature on or off. After you have clicked on the keyboard icon, go up to the drop down menu and select Key Repeat. If you have some students that have a difficult time with striking and then releasing from a key, you can simply turn off the key repeat by deselecting Enable key repeat. Likewise, the Dana gives you the ability to really fine tune the key repeat feature so that you can keep it on, but you can also change the Start repeat delay by moving the bar from Less to More delay. You will need to do some trial and error to get the setting just right - but the Dana does give you a fair amount of control over this feature. Similarly, you can also adjust the delay between repeats by again moving a bar from Less delay to More delay. Once you have set these features they will be stored in memory so that the next time you use it the settings will be retained.

Once you are in the Keyboard mode, select Layout from the drop down menu on the top right to change the keyboard layout. The Dana offers four different layouts to choose from: QWERTY, Dvorak, Left handed and Right handed. To change the keyboard layout simply select the one that you want from the drop down menu. Unlike the AlphaSmart 3000 you will not be able to pop the keys off the Dana once you have changed the layout. Once you have remapped the keyboard on the Dana, you will need to purchase a set of key cap stickers and affix them to the appropriate keys.

The AlphaSmart Company understands the needs of students with a wide range of disabilities and has included both the Sticky keys and Slow keys feature in the Dana. Sticky keys is a wonderful system feature which makes it easy for students to who have difficulty striking or holding keys simultaneously. Imagine that you are a student who has only use of one hand and you need to capitalize the first letter in a name. Think about what you would need to do for a moment. First, you would need to hold the shift key down almost at the same time as you would need to press the letter key. This can be a very difficult task for some students to do. With Sticky keys turned on you simply can depress the Shift key and take your finger off the Shift key and press the next letter that you want. Sticky keys will hold down the Shift key and capitalize the first letter, then release the Shift key so that the letters that follow are lower case. This is a wonderful feature and one that I am glad has been retained in the Dana. You can enable the Sticky key feature from the Keyboard mode. Simply select Special Needs from the drop down menu and select Sticky keys.

Another welcome addition to the Dana is the Slow keys feature. You can enable the Slow keys feature from within the Keyboard mode. Simply select Special Needs from the drop down menu and select Slow keys. Slow keys allows the user to determine how responsive the computer is after a key has been pressed. Slow keys, in effect, lets you set the time delay before the Dana accepts the key stroke.There are times when working with students with motor impairments that you may want to put a delay in due to their inaccuracy of striking a specific key. Slow keys can be considered a keyguard done in software. The Dana allows you to enable the Slow keys feature as well as set it up with Less or More delay. There is a test area at the bottom of the screen that will allow you to test the settings that you have selected.

Conclusion

The Dana from AlphaSmart breaks new ground for a portable alternative to a laptop computer. For many of the students that we work with, the Dana is a flexible tool that has a host of features that makes it a real viable solution for the students we work with. The Dana is very customizable and maintains a lot of the features that we have come to appreciate from the AlphaSmart Company. Users will find AlphaWord to be a powerful and featured word processor that is a right balance for the Dana. All in all, the Dana is an exciting new tool that is highly expandable and one that you will certainly want to test drive.

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